Agenda

Town of Seekonk, MA
Planning Board

02/9/16
7:00 PM
Seekonk Town Hall
BOS Meeting Room

Type of meeting: Planning Board Public Hearing, Regular Meeing, and Work Session

Agenda topics – More information on each item can be found on our website – www.seekonk-ma.gov under Departments>Planning>Agenda Items

7:00 PM	Public Hearing on the application of **Joseph Vieira, JMV Realy, LLC** for deinitive plan approval for **Curt Street Extension**, four lot subdivison of land located at the end of Curt Street, being AP 21, Lot 23 in the R-2 Zoning district	Joseph Vieira
	Application for covenant release and setting of pre-acceptance contingency surety related to the public improvements associated with the **Girard Estates** definitive subdivision being AP 15 lot 83	Girard Estates LLC
	Site plan application for **1727 Fall River Avenue** being AP 1 lot 20 located in an industrial zoning district	PMI Realty, LLC
	Site plan applications for proposed Large Scale Solar Photovoltaic Facility at **50 Woodland Avenue** being AP 35 lots 23, 24, and 26.	TJA Solar
	Approval not Required Plan for land located at **242 Lincoln St.** being AP 16, Lot 28	Edward G. Turnbull Jr.
	Work Session on Draft Spring 2016 Zoning By-Law Amendments	John Aubin
	SRPEDD Technical Assistance Grant application	John Aubin
	Town Planner Monthly Report	John Aubin
	Correspondence	John Aubin
	Approval of Minutes:	
	Adjournment	

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

The attached documentation is a highlight of what is on this agenda. Please note there are additional documents that can be viewed in the Planning Board Office.

Agenda Item: 1
Date: February 9, 2016

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

TO: Planning Board
FROM: John J. Aubin III, Town Planner
RE: Application of for definitive plan approval for **Curt Street Extension**, four lot subdivision of land located near the intersection of Curt Street and Hemlock Street, being AP 21, lot 23 located in the R-2 zoning district.

APPLICANT: Joseph Viera, JMV Realty, LLC
OWNER: same
LOCATION: Curt Street, AP 21, lot 23
REQUESTED ACTION: Public hearing on definitive plan for a proposed 4 lot subdivision of land.
APPLICABLE REGULATIONS:

1. SECTION V DEFINITIVE PLAN
2. SECTION VI PERFORMACE GUARANTEE
3. SECTION VII DESIGN STANDARDS
    - Section 7.1 General
4. SECTION VIII CONSTRUCTION OF WAYS AND INSTALLATION OF UTILITIES
5. SECTION IX ADMINISTRATION

ANALYSIS:

The applicant is before the Planning Board for a public hearing on a requested definitive plan review of Curt Street Extension, a four (4) lot conventional subdivision submitted in accordance with **Section V Definitive Plan**. Preliminary Plan approval for the subdivision was granted on April 14, 2015. During the preliminary review by the Planning Board discussion focused on the following points:

- Drainage in the area;
- The status of the Conservation Commission's review of the proposed wetland crossing;
- Fire safety;
- Drainage and;
- The proposed shared driveway.

A copy of the minutes of the Board's discussion of the Preliminary Plan is attached for your review. The proposed shared driveway and wetlands crossing have been approved by the Conservation Commission and are in the process of being installed.

The subject parcel is comprised of 9 acres of land and is currently undeveloped with a mix of mature vegetation (upland and wetland) and a stream running north to south through the central portion of the property. The stream is an unnamed tributary of the Runnins River and an existing storm water drainage outfall from Curt Street is located on the southern bank. The land varies in elevation but generally slopes to the stream from the eastern and western portions of the site. Curt Street currently terminates at a dead-end stub shortly after its intersection with Hemlock Street.

The surrounding area is comprised of residential development with Arcade Avenue and the Turner Reservoir to the west. The surrounding development is situated on lots ranging from about a half acre in size along Sykes and Hemlock to the north and west, to residential development on 1.5 acre lots located to the south and east along Lauren Drive with two larger undeveloped parcels of 6 and 9 acres to the southwest. The entire area is zoned R-2. Two aerials of the existing conditions are attached together with photos from a site visit conducted by this office.

The applicant is proposing a four (4) lot subdivision on the subject parcel accessed via a proposed extension of Curt Street. Two of the lots (subdivision lots 1 and 4) will be accessed directly from Curt Street and two lots (subdivision lots 2 and 3) will be accessed via the shared driveway noted above. Frontage for all lots is provided along the proposed extension of Curt Street. All lots exceed the minimum area requirement with Lots 1 and 4 at approximately .75 of an acre, lot 3 at approximately 2.5 acres, and lot 2 at approximately 4.5 acres.

With regard to the Definitive Subdivision, the public improvements are limited to the proposed extension of Curt Street and associated drainage improvements (two existing catch basins at the current terminus of Curt Street) although it should be noted the drainage design encompasses both the extension of Curt Street and shared driveway. After consultation with the Department of Public Works and Fire Department, the applicant has proposed to terminate Curt Street in a dual "hammerhead" design in order to provide emergency vehicles and snow plows adequate area to accomplish turn around movements within the proposed public right of way. Lots 1 and 4 are proposed to be served by the Seekonk Water District via an extension of the existing 6" water main in Curt Street. Lots 2 and 3 are proposed to be serviced by on-site wells. Individual onsite wastewater treatment systems are proposed for septic wastewater and stormwater is proposed to be handled via the installation of a system of detention basins with sedimentation fore-bays located within the proposed drainage easement areas.

The application was forwarded to the reviewing departments for comments and was reviewed at the December 24, 2015 and January 28, 2016 Technical Review Committee meetings. During those reviews comments and discussion focused on emergency vehicle access to the eastern portion of the development, identification

signage for lots 2 and 3, and the installation of the bridge. With regard to outstanding staff comments please note the following:

1. The Fire Department has requested the applicant's engineer confirm the compliance of the proposed emergency vehicle turnaround on the shared driveway with the applicable design criteria of the Fire Code and that the driveway turn around area be signed "No Parking";
2. The Fire Department has requested the applicant confirm whether a hydrant is to be installed or residential sprinklers for the proposed dwellings on lots 2 and 3;
3. The Communications Director has requested that proper address and directional signage be provided at Curt Street, at the start of the shared driveway, directing responding emergency vehicles to lots 2 and 3; and
4. The Building Official has requested that certification from a registered engineer be submitted with regard to the adequacy of the bridge, as designed, to carry emergency vehicles and other heavy equipment.

A Peer review of the submitted stormwater drainage system design was conducted by Woodward and Curran. A copy of the comments generated by the initial peer review is attached. The applicant has submitted a revised plan set and drainage analysis in response to the comments however the revisions remain under peer review and any action the Planning Board may take with regard to the application should be conditioned on final resolution of the peer review comments. The proposed septic systems is scheduled for Board of Health review on February 17, 2016. The Health Agent has indicated that no site constraints would preclude the proposed system locations.

No waivers are specifically requested however this should be confirmed by the applicant and project engineer. The Planning Board may wish to solicit testimony from the project engineer as to the conformance of the proposed lots with the general and public Improvement standards set forth in **Sections VII** and **VIII** of the **Rules and Regulation Governing the Subdivision of Land**.

It is respectfully requested that the Planning Board make the follow findings of facts with regard to the proposed development based on the evidence presented by the applicant:

- Pursuant to **Section V** that the applicant has met the requirements for the grant of a Certificate of Approval for the proposed Definitive Plan.
- Pursuant to **Section 7.1 General,** that the proposed development, as designed and laid out, meets the requirements of public safety including:
    1. Safe vehicular travel;
    2. Adequate storm drainage;
    3. Sewage disposal;
    4. Water supply;

5. Utilities; and
6. Precautions against natural disaster

- That the proposed Definitive Plan otherwise meets the requirements of the **Rules and Regulations Governing the Subdivision of Land in Seekonk Massachusetts** and **Sections 81k** through **81GG** of **Chapter 41** of the **General Law.**

The following conditions are recommended should the Planning Board deem approval of the application appropriate:

1. Final Board of Health approval of the proposed wastewater treatment systems;
2. Final approval of all proposed utility extensions by the Seekonk Water District, Columbia Gas, National Grid and any other utility provider as appropriate;
3. The applicant's engineer shall confirm the compliance of the proposed emergency vehicle turnaround on the shared driveway with the applicable design criteria of the Fire Code;
4. The turnaround area on the eastern portion of the shared driveway shall be marked "No Parking";
5. Proper address and directional signage is to be provided at the start of the shared driveway at Curt Street directing responding emergency vehicles to subdivision lots 2 and 3; and
6. Certification from a registered engineer shall be submitted to the Building Official with regard to the adequacy of the bridge, as designed and installed, to carry emergency vehicles and other heavy equipment;
7. Final resolution of any outstanding comments on the design of the stormwater management system between the Planning Board's consulting engineer and the project engineer; and
8. Any such other conditions the Planning Board may deem necessary to ensure compliance of the application with the applicable provisions of the **Rules and Regulations Governing the Subdivision of Land in the Town of Seekonk**.

TOWN OF SEEKONK FORM C

PLANNING BOARD

100 PECK STREET, SEEKONK, MA 02771
1-508-336-2961

APPLICATION FOR APPROVAL OF DEFINITIVE PLAN

Date: JULY 23, 2015

Applicant Name JOSEPH VIEIRA Phone No. (508) 962-6749

Address 299 PROVIDENCE STREET, REHOBOTH, MA 02769

Plat No. 21 Lot No. 23 Present Zoning R-2

1. Deed of property recorded in Bristol County Registry, Book 22145 Page 269
2. Name of Engineer or Surveyor A. GORODETSKY, P. E. Mass Lic. No. 38071
   Address 422 NORTH MAIIN ST FALL RIVER MA 02720
3. Location and Legal Description of Property (Include Public and Private Ways Bounding Property)
   Vacant land east of Curt St dead end

Checklist Form C

- [x] Application Form (2 x)
  Please note: both copies must be originals, 1 copy for Planning, 1 copy for Town Clerk.
- [x] Application fee $500 per subdivision and $250 per proposed lot, Ck# 1755
  (Payable to the Town of Seekonk)
- [x] Certificate of Good Standing, completed and signed by Tax Collector.
- [x] One copy of "Certified List of Abutters", Form G and the original drawing of the Definitive Plan.
- [ ] Plans received in CD or DVD format after approval.
- [ ] Consultant Review Fees – check made payable to the Town of Seekonk – fee to be determined after submission of application. Payment must be received prior to review (submission complete once received).

- ☐ Inspection Fees – check made payable to the Town of Seekonk – fee to be determined after submission of application. Payment must be received prior to endorsement of Subdivision Plan.
- ☒ Plans received (10) prints, (1) 11" X 17", (see 5.3 of rules & regulations) Six (6) upon approval and (1) mylar.
- ☒ Stormwater Management Plan and Erosion & Sedimentation Control Plan – per Massachusetts Stormwater Standards as stated in DEP Stormwater Management Handbook Volumes 1 & 2; and Categories 20B and 20C of the Seekonk Town Bylaws
- ☒ Applicant responsible for forwarding (1) copy of Plans and Drainage Report to Consulting and Inspecting Engineers. Planning Office will advise who the Consulting & Inspecting Engineers are once application is received.

To the Planning Board:

The undersigned hereby applies for the approval of said DEFINITIVE PLAN by the Board, and in furtherance thereof hereby agrees to abide by the Board's Rules and Regulations. The undersigned hereby further covenants and agrees with the Town of Seekonk, upon the approval of said DEFINITIVE PLAN by the Board.

Received by Planning Board or Town Clerk:

Date: _____

Time: _____

*Signature Christina Testa

*Signature of Applicant _____

Address of Applicant 299 PROVIDENCE ST

REHOBOTH MA

*Signature of Owner or Notarized letter (if applicable)

_____

Address of Owner_____

***Please use blue pen to sign**

JUL 29'15 PM1:21

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

Date: September 9, 2015

Mr. Joseph Vieira
299 Providence Street
Rehoboth, MA 02769

Re: Application of **Joseph Vieira** for definitive plan approval for **Curt Street Extension,** four lot subdivision of land located at the intersection of Curt Street and Sykes Road, being AP 21, lot 23 located in the R-2 zoning district.

Dear Mr. Vieira,

I am writing regarding the above referenced definitive subdivision plan application in order to transmit to you the comments generated to date by the staff and peer reviews of the project and to discuss the scheduling of the public hearing on the matter. Attached please find copies of correspondence from the Conservation Commission, Board of Health, and Woodard and Curran pertaining to the proposed definitive plan and stormwater management design. Please have Mr. Gorodetsky review the comments and revise or otherwise respond to the issues raised and inquiries made in the comments.

Regarding the public hearing, currently tentatively scheduled for October 11, 2015, I have two main concerns around our ability to get the review and revision process far enough along to allow for the Planning Board to approve the definitive plan in October.

The first concern is based on the fact that Mr. Gorodetsky is not currently licensed as a Title Five design engineer by the Seekonk Board of Health, as such, it is unlikely that the Board of Health will review and certify the proposed lots as suitable for the location of single family dwellings to be served by individual septic systems prior to October 11, 2015. Section 5.7 Review by Board of Health as to the Suitability of the Land of the ***Rules and Regulations Governing the subdivision of Land in Seekonk Massachusetts*** gives the Board of Health 45 days to review the

proposed definitive plan but fails to indicate the implications of the Board of Health's failure to act in that timeframe nor how the Planning Board is to construe such a lapse regarding the ultimate approval or denial of an application for definitive plan approval or suitability of land for septic systems. My specific concern regarding your application would be that, lacking a determination from the Board of Health, the Planning Board could potentially find the lack of documentation of suitability of the proposed lots for septic system as grounds for denial of the application. Of course the Planning Board could also grant approval of the definitive plan subject to review and approval of the proposed septic systems by the Board of Health or request a continuance until the site suitability could be documented by the Board of Health. We could speculate as to which of these options or some other alternative the Planning Board may pursue regarding your application; however it would be an exercise in speculation.

The second concern is based on the voluminous nature of comments on the drainage design and Mr. Gordetsky's ability to revise and resubmit a response to the comments in sufficient time to allow Woodard and Curran to review the responses prior to the public hearing. I would also note that the current finding of the reviewing engineer that the submitted design fails to fully comply with the Town of Seekonk's rules and regulations would be clear grounds for denial of the application, as it currently stands, by the Planning Board.

Based on the foregoing and your consideration thereof, I would ask that you inform this office no later than September 16, 2015 as to whether you would like to proceed with the public hearing on October 11, 2015 or enter a continuance of the matter to allow time for the above and attached issues to be adequately addressed.

Sincerely,

John J. Aubin III
Town Planner
Town of Seekonk

Cc
Beth Hallal
Bernadette DeBlander

COMMITMENT & INTEGRITY
DRIVE RESULTS

95 Cedar Street | Suite 100
Providence, Rhode Island 02903
www.woodardcurran.com

T 800.985.7897
T 401.273.1007
F 401.273.5087

WOODARD &CURRAN

Via Electronic Mail

September 3, 2015

Planning Board
Town of Seekonk
100 Peck Street
Seekonk, Massachusetts 02771

Re: Peer Review Services for Curt Street Extension

Dear Members of the Planning Board:

Woodard & Curran has completed our technical and regulatory review of the Application submittals for the proposed extension of Curt Street, as proposed by Joseph Vieira (the Applicant). The proposed four (4) lot residential subdivision (the Project) extends easterly from the existing dead end of Curt Street and approximately 300 feet east of Hemlock Street. The property is within the "R-2" Zone District, and under existing conditions, comprises 8.73 acres of undeveloped wooded land. A perennial stream that outlets to the Runnins River also flows across the site from north to south.

The Application submittals were reviewed for compliance with the applicable sections of the following:

- Rules and Regulations Governing the Subdivision of Land in Seekonk, Massachusetts (as amended March 12, 2013)
  - Section V – Definitive Plan (Sections 5.3 through 5.5 only)
  - Section VII – Design Standards
  - Section VIII – Construction of Ways and Installation of Utilities
- Zoning By-Laws of the Town of Seekonk, Massachusetts (reprinted March 27, 2015)
  - Section 5 – Dimensional Regulations
  - Section 7 – General Provisions
  - Section 8 – Development and Design Standards (Sections 8.3 and 8.10 only)
- Category 20B – Stormwater Management (Construction)
- Category 20C – Stormwater Management (Post-Construction)
  - Massachusetts Stormwater Handbook

DOCUMENTS REVIEWED

The original Application submittals included the following:

- Plan Set: entitled "Definitive Subdivision Plan, Curt Street Extension," prepared by Gorodetsky Engineering, LLC, dated July 23, 2015.
- Stormwater Management Plan: entitled "Stormwater Management Plan to Accompany Curt Street Extension Definitive Subdivision Plan," prepared by Gorodetsky Engineering, LLC, dated July 23, 2015.
- Drainage Analysis: entitled "Curt Street Extension, Seekonk, MA Drainage Analysis," prepared by Gorodetsky Engineering, LLC, dated July 23, 2015.

FINDINGS & RECOMMENDATIONS

Based on the review of the above referenced documentation, Woodard & Curran offers the following comments.

ZONING BY-LAWS

1. Woodard & Curran – September 1, 2015: The Applicant did not depict a 100-foot square on each proposed lot. This requirement promotes geometric lot layouts.

   Recommendation: The Applicant should depict a 100-foot square in accordance with Section 5.1.4, Footnote 5.

RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND

2. Woodard & Curran – September 1, 2015: Features of the Applicant's typical roadway cross-section do not appear to comply with the Town's requirements:

   a. The cross-section indicates a four (4) inch loam and seed, which does not comply with the six (6) inch requirement.

   b. The cross-section does not include a sidewalk.

   Recommendation: The Applicant should update the typical roadway cross-section to comply with Section 7.2.2.6. Further loam and seed requirements are outlined in Section 8.11, and further sidewalk requirements are outlined in Sections 7.3 and 8.7.

3. Woodard & Curran – September 1, 2015: The Applicant has not indicated if the Seekonk Fire Department (FD) and the Department of Public Works (DPW) have reviewed the proposed dead-end configuration.

   Recommendation: The Applicant should provide documentation that outlines the FD's and DPW's findings relative to the dead-end configuration. This documentation is required by Section 7.2.4.

4. Woodard & Curran – September 1, 2015: The easements for Swales 1 and 2 do not appear to meet the dimensional requirements of Section 7.4.1.

   Recommendation: The Applicant should review Section 7.4.1 and update the geometry of the easements.

5. Woodard & Curran – September 1, 2015: The Applicant has proposed a bridge crossing but has not included an easement for this crossing.

   Recommendation: The Applicant should provide an easement for the bridge crossing in accordance with Section 7.4.2.

6. Woodard & Curran – September 1, 2015: The Applicant has not indicated if the Water District has reviewed the proposed water main configuration.

   Recommendation: The Applicant should provide documentation that reflects the Water District's review in accordance with Sections 7.5 and 8.2.1.

7. Woodard & Curran – September 1, 2015: The Applicant has not indicated if the Fire Department has reviewed the proposed fire protection measures, specifically related to the location of the firebox and type of fire suppression infrastructure.

Recommendation: The Applicant should coordinate with the Fire Department and provide documentation that outlines the Fire Department's review in accordance with Sections 7.5.1 and 8.3.

8. Woodard & Curran – September 1, 2015: The Applicant has not provided hydraulic calculations to demonstrate that the proposed bridge crossing and closed conduit drainage systems have been designed to convey flows from the 100- and 25-year rainfall events, respectively.

Recommendation: The Applicant should provide hydraulic calculations to demonstrate compliance with Section 7.6.

9. Woodard & Curran – September 1, 2015: The Applicant requests a waiver for Section 8.2.2.2, which requires electrical and telephone conduits to be placed underground. Woodard & Curran has no comment relative to the Applicant's proposal and provides this item for informational purposes to the Planning Board.

10. Woodard & Curran – September 1, 2015: The Applicant has not indicated the type of property boundary monument that is proposed for the subdivision.

Recommendation: The Applicant should indicate the type of property boundary monument in accordance with Section 8.9.1.

CATEGORY 20C – STORMWATER MANAGEMENT (POST CONSTRUCTION)

11. Woodard & Curran – September 1, 2015: The Applicant delineated stormwater easements for the stormwater infrastructure but did not include access easements to the stormwater infrastructure. These easements are necessary to gain access to the infrastructure.

Recommendation: The Applicant should include access easements to demonstrate compliance with Section 8.C.1.a.

12. Woodard & Curran – September 1, 2015: The Applicant did not provide the estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention, and infiltration. This information is important to understand the potential influence of groundwater on these measures.

Recommendation: The Applicant should include the estimated seasonal high groundwater elevation in accordance with Section 7.A.10.

13. Woodard & Curran – September 1, 2015: The Applicant did not delineate the stormwater flow path for Post-Development Subcatchment "W" on the Stormwater Management Plan. This information is necessary to evaluate the peak rate of runoff from this watershed.

Recommendation: The Applicant should delineate the Post-Development Subcatchment "W" stormwater flow path in accordance with Section 7.A.12.

14. Woodard & Curran – September 1, 2015: There appears to be missing information relative to the proposed drainage system.

a. Cross-section "C" for Detention Area "A" appears to be missing from the Plan Set.

b. Various cross-sections do not include an x- and/or y-axis scale, which is necessary to review the constructability of the respective stormwater measure.

c. A detail of the proposed bridge crossing has not included.

d. Hydraulic calculations (including velocity) for the proposed infrastructure (i.e., subsurface closed conduits, bridge crossing, swales, etc.) have not been provided. This information is important to evaluate this infrastructure's capacity to convey future flows from contributing areas.

e. Spot elevations west of Water Quality Swale "B" have not been included, which are necessary to evaluate how the swale will overtop during a 100-year rainfall event.

f. The catch basin detail appears to conform to the requirements of the Rhode Island Department of Transportation, and not the Massachusetts Highway Construction and Traffic Standard Details (see Section 8.4.3 of the Rules & Regulations Governing the Subdivision of Land). The Applicant should revise the detail accordingly.

g. The proposed dry water quality swales and detention basin are designed to have standing water; however, these measures are meant to empty following a rainfall event.

Recommendation: The Applicant should provide the missing information and address the comments noted above in accordance with Section 7.A.13.

15. Woodard & Curran – September 1, 2015: Woodard & Curran cannot compare the pre- and post-development peak discharge rates for the following reasons:

a. The Applicant included multiple nodes to model the same brook in HydroCAD, which does not accurately represent its attenuation capacity. Therefore, the brook should be one node. This approach will accurately estimate the pre- and post-development peak discharge rates through the brook.

b. The Applicant has included overflow nodes in HydroCAD, but the physical geometry associated with these nodes is not clearly depicted on the Stormwater Management Plan. Since these nodes directly impact the pre- and post-development peak discharge rates, additional information is necessary to support that these nodes have been developed appropriately in HydroCAD.

Recommendation: The Applicant should address the aforementioned comments to comply with Section 7.B.1.

16. Woodard & Curran – September 1, 2015: The Applicant proposes to use the dry water quality swales and the detention basin as recharge measures; however, the Stormwater Handbook does not list these measures as recharge measures since they are not intended to infiltrate into the underlying soil.

Recommendation: The Applicant should provide an infiltration measure that meets the recharge requirement outlined in Section 7.B.3. The infiltration measure must comply with the requirements of the Stormwater Handbook, including those requirements related to subsurface soil investigations in the footprint of the infiltration measure.

17. Woodard & Curran – September 1, 2015: The Applicant proposes to use the dry water quality swales and the detention basin as recharge measures; however, the Stormwater Handbook does not list these measures as recharge measures since they are not intended to infiltrate into the underlying soil.

Recommendation: The Applicant should provide an infiltration measure that meets the recharge requirement outlined in Section 7.B.3. The infiltration measure must comply with the requirements of the Stormwater Handbook, including those requirements related to subsurface soil investigations in the footprint of the infiltration measure.

CONCLUSION

Woodard & Curran found that the proposed project does not fully comply with the aforementioned Town of Seekonk rules and regulations. The Applicant should address the comments and recommendations provided in this letter. Please feel free to call the undersigned below if you have any further questions or comments relative to this matter.

Sincerely,

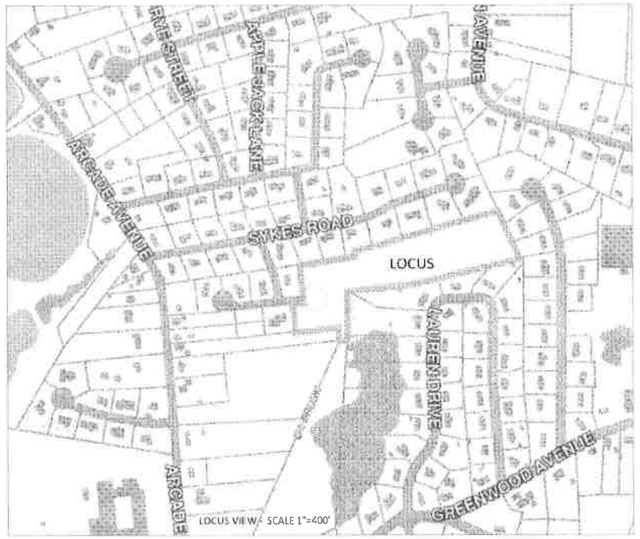
WOODARD & CURRAN INC.

Jeffery Stearns, PE
Vice President

Mark Pereira, PE
Project Engineer

DEFINITIVE SUBDIVISION PLAN
CURT ST EXTENSION
SEEKONK, MASSACHUSETTS

APPLICANT AND OWNER:
JOSEPH VIEIRA



LOCUS VIEW - SCALE 1"=400'

LEGEND

	OFF SITE PROPERTY LINE
	DRIVEWAY & UTILITY EASEMENT LINE
	DRAINAGE EASEMENT LINE
	BORDERING VEGETATED WETLAND LINE AS APPROVED BY SEEKONK CON. COM.
	100' WETLAND SETBACK
	50' WETLAND SETBACK
	25' WETLAND SETBACK
	MEAN ANNUAL HIGH WATER LINE AS APPROVED BY SEEKONK CON. COM.
	LIMIT OF 100 FOOT RIVERFRONT AREA
	LIMIT OF 200 FOOT RIVERFRONT AREA
	RIVER FRONT FLAG
	WETLAND FLAG
G G	GAS
OH OH	OVERHEAD WIRES
D D D	DRAINAGE
W W	WATER
	LIMIT OF CLEARING
	EROSION CONTROL
	EXISTING CATCH BASIN
	DRAINAGE MANHOLE
	PROPOSED CATCH BASIN
	UTILITY POLE
	FLARED END
	PROP. BOUND
	BOUND FOUND
	HYDRANT
	WATER GATE
	WATER BLOW-OFF

ABBREVIATIONS

⅛B, ¼B, ½B, ¾B	BENDS
GV, WV	GATE VALVE, WATER VALVE
T	TEE
YT	45° TEE
DI	DUCTILE IRON, DROP INLET
EX.	EXISTING
TYP.	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE PIPE
RCP	REINFORCED CONCRETE PIPE
BIT. CON.	BITUMINOUS CONCRETE
WSO	WATER SERVICE SHUT-OFF
FE	FLARED END
DMH	DRAINAGE MANHOLE
CB	CATCH BASIN
DI	DROP INLET
GI	GUTTER INLET
CI	CURB INLET
INV	INVERT
CN	SURFACE CURVE NUMBER (HYDROLOGICAL COEFFICIENT)

INDEX

	SHEETS
DEFINITIVE SUBDIVISION PLAN	1
ROADWAY CONSTRUCTION PLAN & PROFILE	2
DRAINAGE CONSTRUCTION PLAN	3
HAMMER-HEAD GRADING PLAN & TYPICAL SECTION SOIL PROFILES	4
TYPICAL SECTIONS & DETAILS	5
EROSION CONTROL PLAN	6
WETLAND ALTERATION, REPLICATION & STREAM CROSSING PLAN	7

1-19-18

REQUESTED WAIVERS FROM RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND:

1. ***8.222 OTHER UTILITIES PARAGRAPH 2.***
   WAIVER REQUESTED TO PLACE ELECTRICAL AND TELEPHONE CONDUITS ABOVE GROUND
2. ***7.2.3.1 GRADE***
   WAIVER REQUESTED FOR ROADWAY SLOPE FROM 1% TO 0.7%

LEGEND

BORDERING VEGETATED WETLAND LINE AS APPROVED BY SEEKONK CON. COM.
MEAN ANNUAL HIGH WATER LINE AS APPROVED BY SEEKONK CON. COM.
LIMIT OF 200 FOOT RIVERFRONT AREA
OFF SITE PROPERTY LINE
DRIVEWAY & UTILITY EASEMENT LINE
DRAINAGE EASEMENT LINE
RIVER FRONT FLAG
WETLAND FLAG
PROPOSED BOUND - 5" x 5" x 4' PRECAST CEMENT CONCRETE BOUND WITH DRILL HOLE
BOUND FOUND

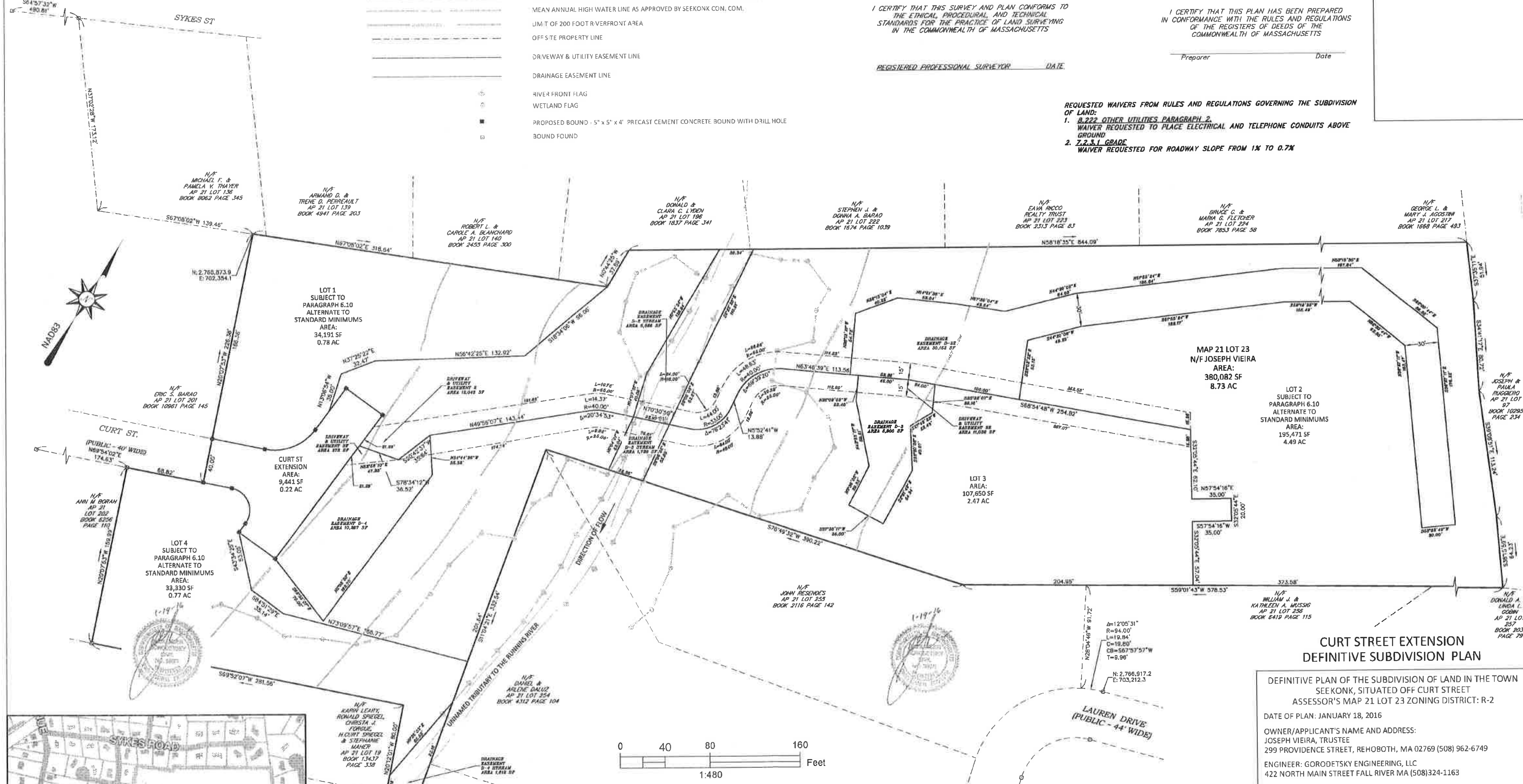
I CERTIFY THAT THIS SURVEY AND PLAN CONFORMS TO THE ETHICAL, PROCEDURAL, AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS

REGISTERED PROFESSIONAL SURVEYOR DATE

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS

Preparer Date

REQUESTED WAIVERS FROM RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND:
1. **8.222 OTHER UTILITIES PARAGRAPH 2.**
   WAIVER REQUESTED TO PLACE ELECTRICAL AND TELEPHONE CONDUITS ABOVE GROUND
2. **7.2.3.1 GRADE**
   WAIVER REQUESTED FOR ROADWAY SLOPE FROM 1% TO 0.7%



NOTES & REFERENCES

1. REFERENCE IS MADE TO THE FOLLOWING MAPS & PLANS:
   A. "GREENWOOD SUBDIVISION OF LAND IN SEEKONK, MASS. FOR ROBERT L. PHILLIPS SCALE: 1"=40' 28, 1979 2 SHEETS ALLEN D. QUINTIN RLS #27872, PETER ALVITI, JR. P.E. #29609."
   B. "FARM ACRES NO. 2 SEEKONK, MASS. BELONGING TO GEORGE E. AND AUGUSTA SYKES OCT., 1957 1"=80' WATERMAN ENGINEERING COMPANY."
   C. "PROPERTY IN SEEKONK, MASS. BELONGING TO GEO. SYKES & WIFE SCALE: 1"=40 FT. SURVEYED & DRAWN MAY 1949 BY R.Z. MACOMBER, C.E. REVISED SEPT. 1951 GEO. J. GEISSER & ASSOC., ENGR'S."
   D. "FARM ACRES SEEKONK, MASS. BELONGING TO GEORGE E. AND AUGUSTA SYKES MAY, 1954 REVISED 30, 1955 SCALE: 1"=80' WATERMAN ENGINEERING COMPANY."
   E. "PRELIMINARY PLAN OF SURVEY IN SEEKONK, MASS. FOR MARIE R. ROHLAND SCALE: 1'=50' DATE: MAY, 1979 STANLEY ENGINEERING, INC."
2. REFERENCE IS MADE TO THE FOLLOWING BRISTOL COUNTRY REGISTRY OF DEEDS RECORDS REGARDING RECORD TITLE TO THE PREMISES SURVEYED:
   A. BOOK 13437 PAGE 35 - LOT 23, KARIN LEARY, RONALD SPIEGAL, CHRISTA J. FORGUE,
   H. CURT SPIEGAL & STEPHANIE MAHER.
3. THESE PREMISES MAYBE SUBJECT TO THE FOLLOWING EASEMENTS, RIGHTS OF WAY OR AGREEMENTS OF RECORD.
   A. BOOK 13437 PAGE 35 - "RIGHTS OF DRAINAGE FARM CURT ST."
4. THESE PREMISES ARE SITUATED IN ZONE X (AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOODING) AS SHOWN ON MAP 25005C0204F, EFFECTIVE ON 07/07/2009.
5. THE VERTICAL DATUM FOR THIS PROJECT IS NAVD88, THE HORIZONTAL DATUM IS NAD83, ESTABLISHED BY GPS OBSERVATIONS.
6. THESE PREMISES ARE SITUATED IN 'R-2' ZONING DISTRICT.
7. THE AERIAL TOPOGRAPHIC MAPPING WAS COMPILED BY EASTERN TOPOGRAPHICS, INC. FROM AERIAL PHOTOGRAPHS CAPTURED APRIL 20, 1995. GROUND CONTROL WAS CONDUCTED BY WATERMAN ENGINEERING COMPANY BY GPS SURVEYING METHODS. FIELD EDITS WERE PERFORMED BY WATERMAN ENGINEERING COMPANY.
8. WETLAND DELINEATION WAS PERFORMED BY SITE SOLUTIONS INC, SURVEYED BY GORODETSKY ENGINEERING LLC, AND APPROVED BY SEEKONK CONSERVATION COMMISSION.

CURT STREET EXTENSION DEFINITIVE SUBDIVISION PLAN

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

SHEET 1 OF 7

SCALE 1"-40'

PRELIM. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

PERFORMANCE SURETY IN THE AMOUNT OF ____________ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE ____________ SAID SURETY HAVING BEEN POSTED ON ____________, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

CLERK

SYKES ST

HEMLOCK ST.

CURT ST.
(PUBLIC - 40' WIDE)

N/F
MICHAEL F. &
PAMELA V. THAYER
AP 21 LOT 138
BOOK 8062 PAGE 395

N/F
ARMAND D. &
IRENE D. PERREAULT
AP 21 LOT 139
BOOK 4941 PAGE 203

255A
WINDSOR LOAMY SAND, 0 TO 3
PERCENT SLOPES
HSG A N/F
ROBERT L. &
CAROLE A. BLANCHARD
AP 21 LOT 140
BOOK 2455 PAGE 300

43A
SCARBORO MUCKY FINE SANDY
LOAM, 0 TO 3 PERCENT SLOPES
HSG D

N/F
DONALD &
CLARA C. LYDEN
AP 21 LOT 196
BOOK 1837 PAGE 341

TOP EL=45.41
12" RCP
CULVERT
TOP EL=44.21

EXISTING BRIDGE

N/F
EAVA WOOD
REALTY TRUST
AP 21 LOT 223
BOOK 2313 PAGE 85

SWALE 2

INFILTRATION AREA 3
BOT EL=49.0
OUTFLOW 5'(L) BROAD WEIR EL=50
TOP 3' BERM EL=51 MIN.
SIDE SLOPES 3:1

SEDIMENT
FOREBAY 2
TOP CURB
EL=50.1
BOT EL=49.0

INFILTRATION AREA 2
BOT EL=49.0
OUTFLOW 6'(L) BROAD
WEIR EL=50
TOP 3' BERM EL=51 MIN.
SIDE SLOPES 3:1

PROP.
OVERHEAD
WIRES

10' WIDE RIP
RAP WATERWAY
AT DRIVEWAY
LOW POINT
EL=51.1

PROP. HOUSE:
TOP FOUNDATION 61.0
WALK-OUT BASEMENT
ELEVATION IN THE BACK
OF THE HOUSE SLAB 53.0

RESERVE
SAS

INFILTRATION AREA 4
BOT EL=49.0
OUTFLOW 5' (W)
BROAD WEIR EL=50
TOP 3' BERM EL=51
MIN.
SIDE SLOPES 3:1

SEDIMENT FOREBAY 4
TOP OUTFLOW 10' (W)
BROAD WEIR EL=50
BOT EL=49.0

PROP. HOUSE:
TOP FOUNDATION
58.5
BASEMENT SLAB
50.5

REMODEL EXIST. CATCH BASIN
TO DRAIN MANHOLE
BRING FRAME & COVER TO
PROP. FIN GRADE
EL=50.0
EXIST. F&C=49.36
EXIST. 12" RCP OUT=49.2

12" CONC PIPE INV.
41.5
12" EX. RCP L= 116' S=0.7%

BENCHMARK:
CENTER
CATCH
BASIN
GRATE
EL=51.05
NAVD88

N/F
ERIC S. BARAO
AP 21 LOT 201
BOOK 10961 PAGE 145

12"x10'x12"
MODIFIED ROCKFILL
WATERWAY

BENCHMARK:
TRAVERSE
STATION
MAG NAIL
EL=49.50
NAVD88

LIMIT OF
EXIST.
PVMNT
LOW. UT.
POLE

N/F
ANN M BORAH
AP 21
LOT 202
BOOK 6258
PAGE 110

PROP. HOUSE
FO AT HOUSE 56.5
GARAGE SLAB 51.5
TOP FOUNDATION 59.5

PROP.
DRIVEWAY

PROP.
WATER
SERVICE

245B
HINCKLEY LOAMY SAND, 3 TO 8
PERCENT SLOPES
HSG A

SEDIMENT FOREBAY 1
TOP CURB EL=49.5
BOT EL=49.0

INFILTRATION AREA 1
BOT EL=49.0
OUTFLOW 4'(L) BROAD
WEIR EL=49.5
TOP 3' BERM EL=50.5 MIN.
SIDE SLOPES 3:1

4 FT WIDE OUTFLOW
CHANNEL D=18"
12" MOD. ROCKFILL
DISCHARGE POINT
EL=49.0

RESERVE
SAS

REMODEL EXIST. CATCH BASIN
INTO DRAIN MANHOLE;
EXIST. F&G=48.59
BRING FRAME AND COVER TO
PROP. FIN. GRADE EL=50.0
12" RCP FR CURT ST IN=43.21
12" RCP FR EXIST CB IN=43.07
INV OUT TO DMH =42.71

N/F
JOHN RESENDES
AP 21 LOT 255
BOOK 2116 PAGE 142

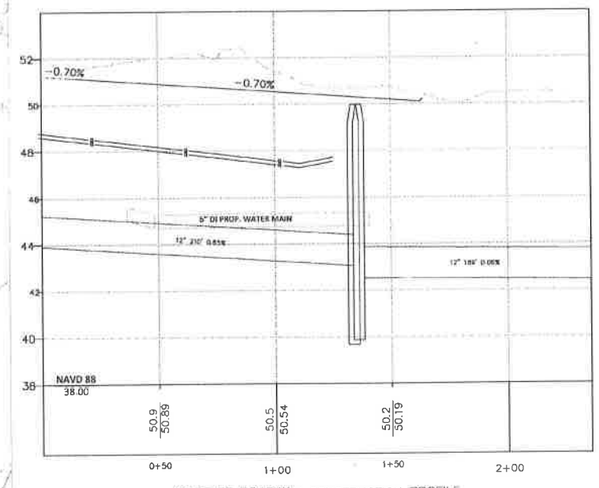
EXIST. FE
91.1

N/F
DANIEL &
ARLENE DALUZ
AP 21 LOT 254
BOOK 4312 PAGE 104

N/F
DAVID &
CATHERINE CORREIA
AP 21 LOT 253
BOOK 2404 PAGE 268

N/F
KARIN LEARY,
RONALD SPIEGEL
CHRISTA J.
FORGUE,
H. CLINT SPIEGEL
& STEPHANIE
MAHER
AP 21 LOT 19
BOOK 13437
PAGE 338

0 30 60 120 Feet
1:360



CURT ST ROADWAY CONSTRUCTION PROFILE

CURT STREET EXTENSION
ROADWAY CONSTRUCTION PLAN & PROFILE

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN
SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

SHEET 2 OF 7

HORIZONTAL SCALE 1"=30'

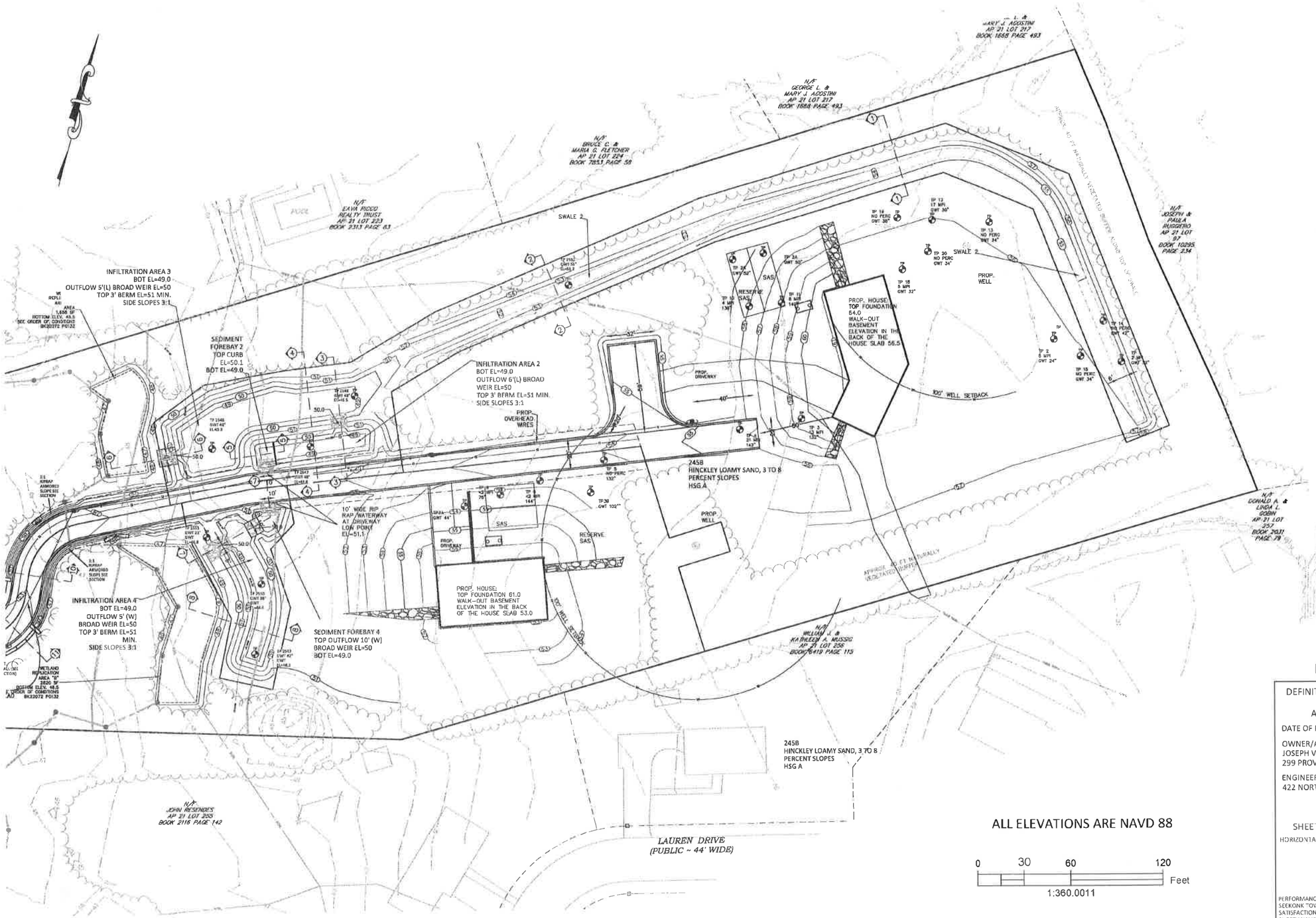
VERTICAL SCALE 1"=3'

PRELIM. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

PERFORMANCE SURETY IN THE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____, SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

_____
CLERK

COMMONWEALTH OF MASSACHUSETTS
ALEXANDER GORODETSKY
CIVIL
No. 50497
REGISTERED PROFESSIONAL ENGINEER
1-19-16



CURT STREET EXTENSION
DRAINAGE CONSTRUCTION PLAN

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

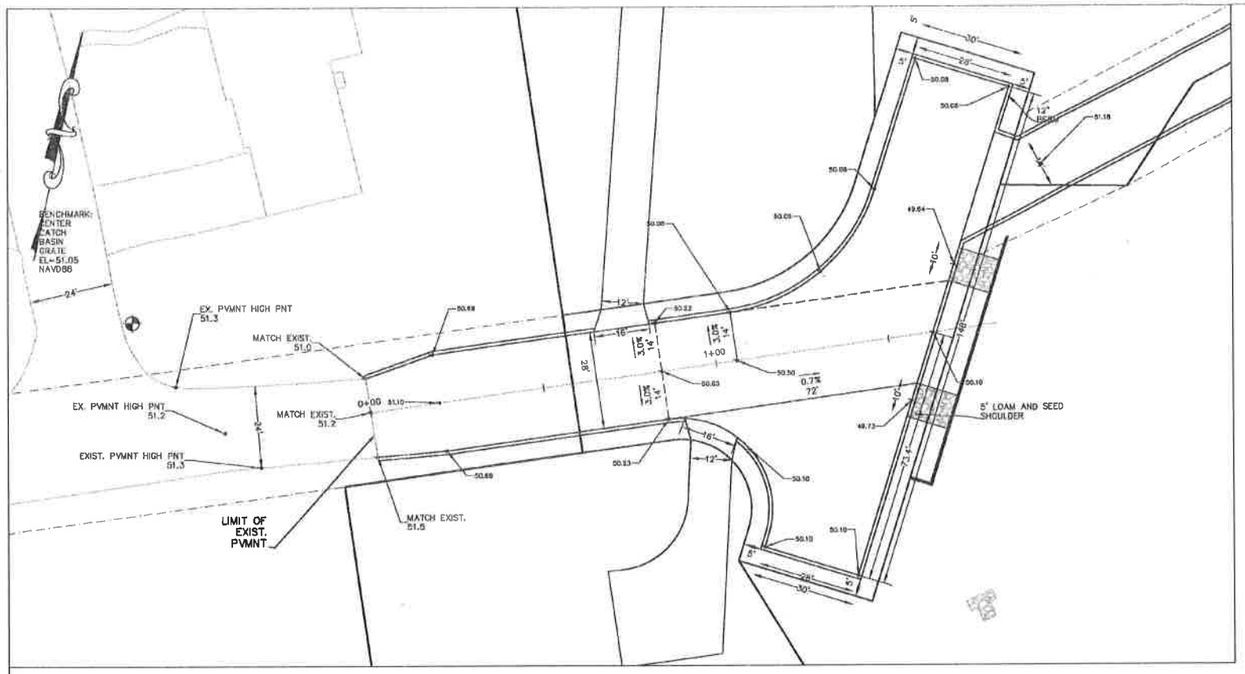
SHEET 3 OF 7

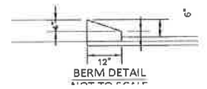
HORIZONTAL SCALE 1"=30'

PRELIM. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

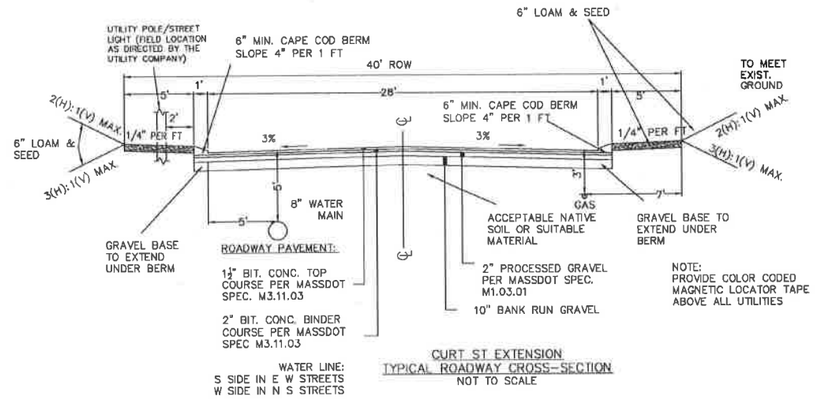
PERFORMANCE SURETY IN THE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____ SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

_____
CLERK





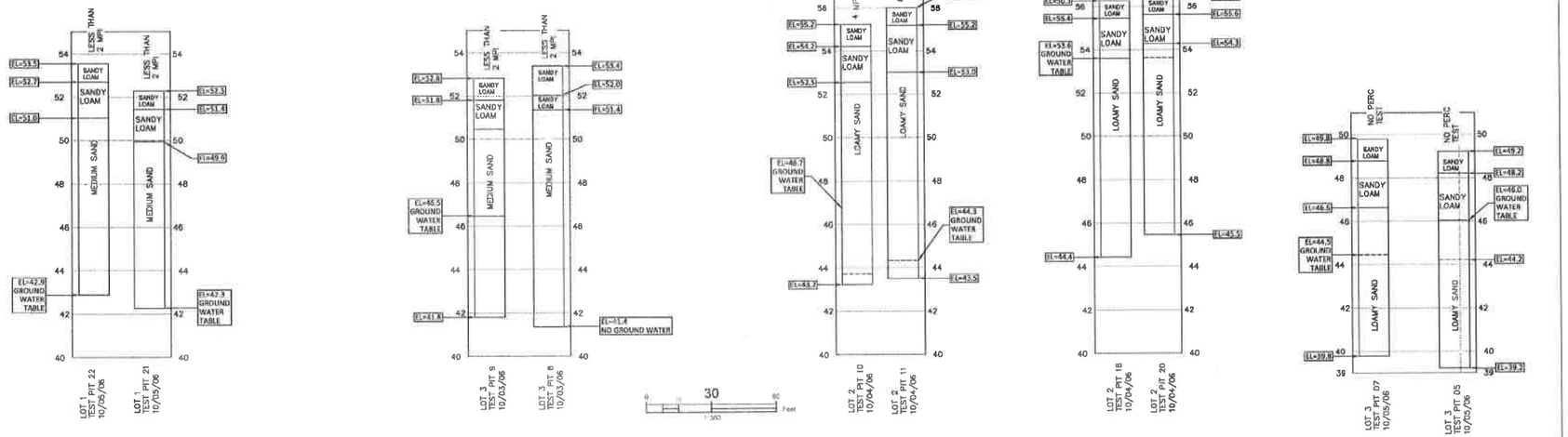
BERM DETAIL
NOT TO SCALE



CURT ST EXTENSION
TYPICAL ROADWAY CROSS-SECTION
NOT TO SCALE

0 10 20 40 Feet
1"=20'

GRADING PLAN
SCALE 1"=20'



0 15 30 60 Feet
1"=30'

TEST PIT SOIL PROFILES
SCALE: HORIZONTAL 1"=20' VERTICAL 1"=2'

ALL ELEVATIONS ARE NAVD 88

CURT STREET EXTENSION
HAMMER-HEAD GRADING PLAN & TYPICAL SECTION
SOIL PROFILES

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

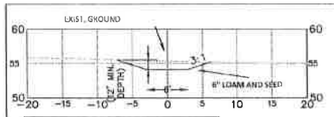
SHEET 4 OF 7

SCALE AS NOTED

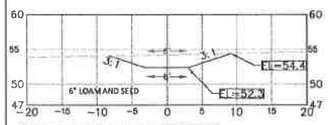
PRELIM. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

PERFORMANCE SURETY IN "HE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK "OWN "REASURER "O ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____ SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

_____
CLERK

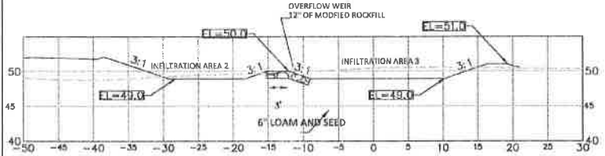


SWALE 2 SECTION 1 – 1
SECTION 1–1
SCALE HORIZ. 1"=10' VERT. 1"=10'

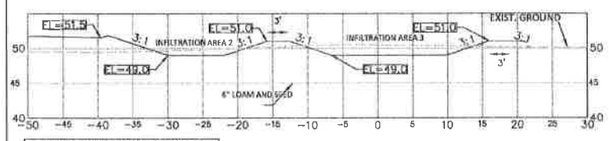


SWALE 2 SECTION 2 – 2
SECTION 2–2
SCALE HORIZ. 1"=10' VERT. 1"=10'

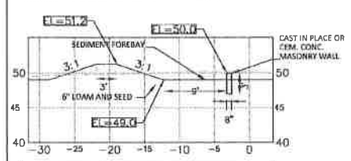
SCALE



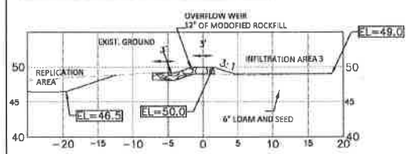
INFILTRATION AREA 2 & 3
SECTION 3–3
SCALE HORIZ. 1"=10' VERT. 1"=10'



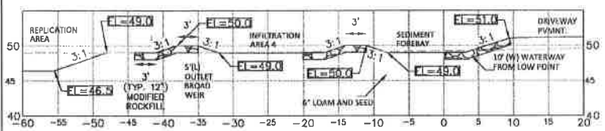
INFILTRATION AREA 2 AND 3
SECTION 4–4
SCALE HORIZ. 1"=10' VERT. 1"=10'



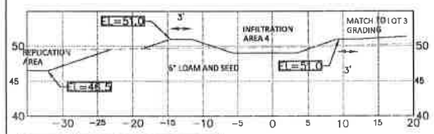
INFILTRATION AREA 2 – SEDIMENT FOREBAY
SECTION 5–5
SCALE HORIZ. 1"=10' VERT. 1"=10'



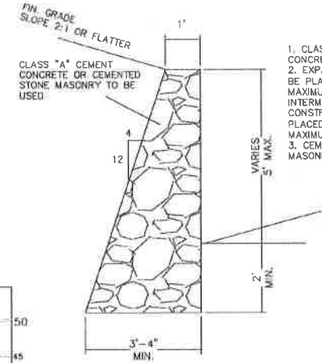
INFILTRATION AREA 3 OUTLET
SECTION 6–6
SCALE HORIZ. 1"=10' VERT. 1"=10'



INFILTRATION AREA 4 SEDIMENT FOREBAY & OUTLET
SECTION 7–7
SCALE HORIZ. 1"=10' VERT. 1"=10'

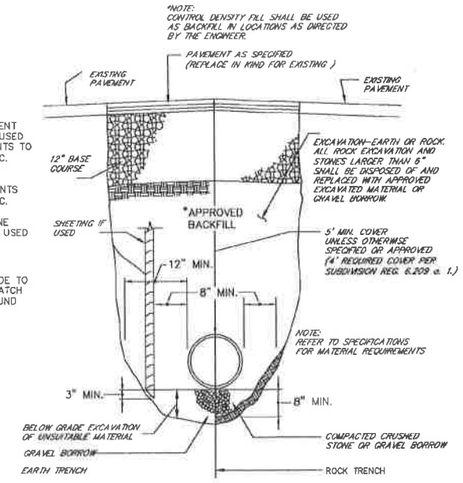


INFILTRATION AREA 4
SECTION 8–8
SCALE HORIZ. 1"=10' VERT. 1"=10'

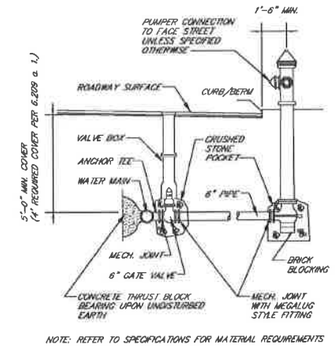


1. CLASS "A" CEMENT CONCRETE TO BE USED
2. EXPANSION JOINTS TO BE PLACED 90' O.C. MAXIMUM WITH INTERMEDIATE CONSTRUCTION JOINTS PLACED AT 30' O.C. MAXIMUM
3. CEMENTED STONE MASONRY MAY BE USED

LOW RETAINING WALL
TYPICAL DETAIL
SCALE 1"=2'

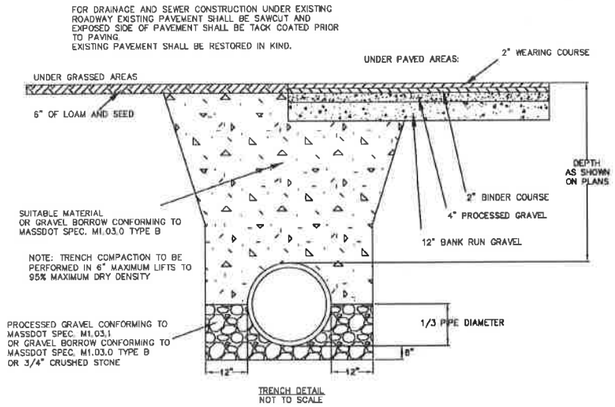


TYPICAL WATER TRENCH SECTION
NOT TO SCALE

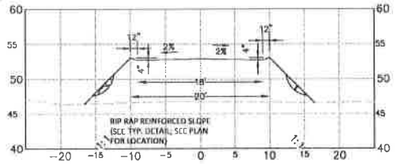


NOTE: REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS

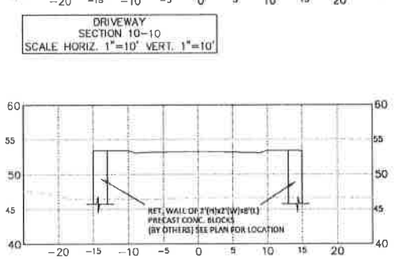
NEW HYDRANT CONNECTION
NOT TO SCALE



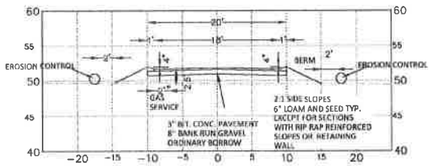
TRENCH DETAIL
NOT TO SCALE



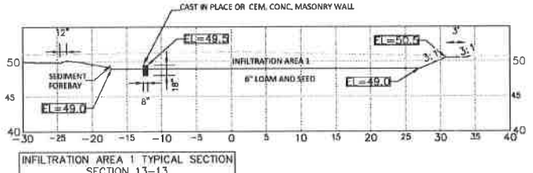
DRIVEWAY
SECTION 10–10
SCALE HORIZ. 1"=10' VERT. 1"=10'



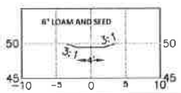
DRIVEWAY SECTION WITH RET. WALLS
SECTION 11–11
SCALE HORIZ. 1"=10' VERT. 1"=10'



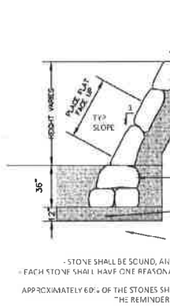
DRIVEWAY TYPICAL SECTION
SECTION 9–9
SCALE HORIZ. 1"=10' VERT. 1"=10'



INFILTRATION AREA 1 TYPICAL SECTION
SECTION 13–13
SCALE HORIZ. 1"=10' VERT. 1"=10'



INFILTRATION AREA 1 OUTFLOW SWALE
SECTION 12–12
SCALE HORIZ. 1"=10' VERT. 1"=10'



NOTES

1. MATERIALS:
- STONE SHALL BE SOUND, ANGULAR IN SHAPE, AND FREE FROM STRUCTURAL DEFECTS.
- EACH STONE SHALL HAVE ONE REASONABLY FLAT FACE AND A THICKNESS PERPENDICULAR TO THE FACE OF NOT LESS THAN 12-INCHES.
APPROXIMATELY 60% OF THE STONES SHALL VARY FROM 2 TO 10 CUBIC FEET IN VOLUME AND THE REMINDER (40%) SHALL VARY FROM 8- TO 9-CUBIC FEET IN VOLUME.
- ALL STONE USED SHALL BE FROM THE SAME SOURCE.
2. EXECUTION:
- LARGER STONES SHALL BE CAREFULLY PLACED (NOT DUMPED) CLOSELY TOGETHER THROUGHOUT THE SURFACE AND THE INTERSTICES CAREFULLY CHINKED WITH SMALLER STONES.
- TRENCH BOTTOM TO BE COMPACTED PRIOR TO PLACEMENT OF GRAVEL

R P RAP REINFORCED SLOPE
TYPICAL DETAIL
NOT TO SCALE

CURT STREET EXTENSION
TYPICAL SECTIONS & DETAILS

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

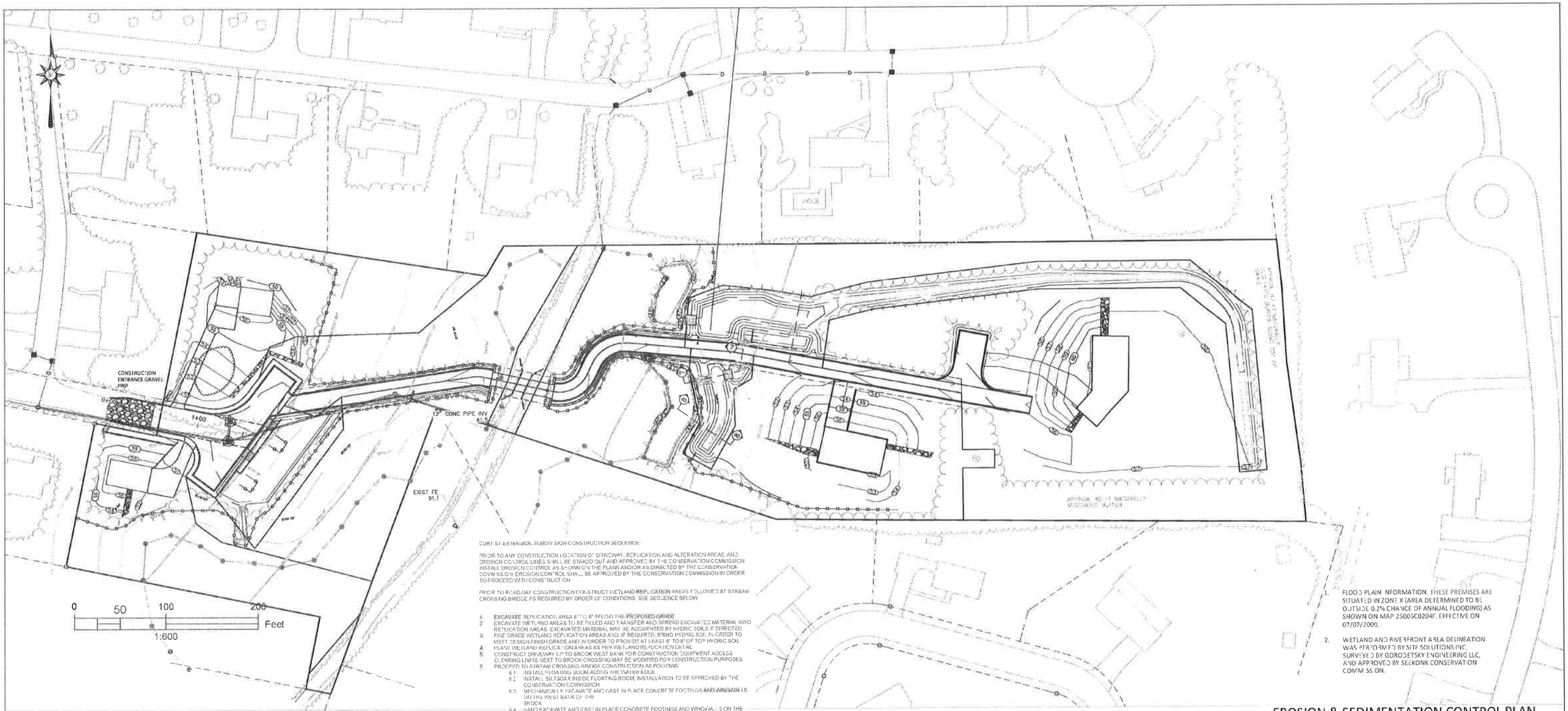
SHEET 5 OF 7

SCALE AS NOTED

PRELIM. PLAN FILED 2015
DEF. PLAN FILED 2015
DEF. PLAN APPROVED 2015
DEF. PLAN ENDORSED 2015

PERFORMANCE SURETY IN THE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____ SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

_____
CLERK



CURT ST EXTENSION SUBDIVISION CONSTRUCTION SEQUENCE:

PRIOR TO ANY CONSTRUCTION LOCATION OF DRIVEWAY, REPLICATION AND ALTERATION AREAS, AND EROSION CONTROL LINES SHALL BE STAKED OUT AND APPROVED BY THE CONSERVATION COMMISSION INSTALL EROSION CONTROL AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE CONSERVATION COMMISSION EROSION CONTROL SHALL BE APPROVED BY THE CONSERVATION COMMISSION IN ORDER TO PROCEED WITH CONSTRUCTION

PRIOR TO ROADWAY CONSTRUCTION CONSTRUCT WETLAND REPLICATION AREAS FOLLOWED BY STREAM CROSSING BRIDGE AS REQUIRED BY ORDER OF CONDITIONS. SEE SEQUENCE BELOW

1. EXCAVATE REPLICATION AREA 6" TO 8" BELOW THE PROPOSED GRADE
2. EXCAVATE WETLAND AREAS TO BE FILLED AND TRANSFER AND SPREAD EXCAVATED MATERIAL INTO REPLICATION AREAS. EXCAVATED MATERIAL MAY BE AUGMENTED BY HYDRIC SOILS IF DIRECTED
3. FINE GRADE WETLAND REPLICATION AREAS AND, IF REQUIRED, BRING HYDRIC SOIL IN ORDER TO MEET DESIGN FINISH GRADE AND IN ORDER TO PROVIDE AT LEAST 6" TO 8" OF TOP HYDRIC SOIL
4. PLANT WETLAND REPLICATION AREAS AS PER WETLAND REPLICATION DETAIL
5. CONSTRUCT DRIVEWAY UP TO BROOK WEST BANK FOR CONSTRUCTION EQUIPMENT ACCESS CLEARING LIMITS NEXT TO BROOK CROSSING MAY BE MODIFIED FOR CONSTRUCTION PURPOSES
6. PROCEED TO STREAM CROSSING BRIDGE CONSTRUCTION AS FOLLOWS
   - 6.1 INSTALL FLOATING BOOM ALONG THE WATER EDGE
   - 6.2 INSTALL SILTSOXX INSIDE FLOATING BOOM, INSTALLATION TO BE APPROVED BY THE CONSERVATION COMMISSION
   - 6.3 MECHANICALLY EXCAVATE AND CAST IN PLACE CONCRETE FOOTINGS AND WINGWALLS ON THE WEST BANK OF THE BROOK
   - 6.4 HAND EXCAVATE AND CAST IN PLACE CONCRETE FOOTINGS AND WINGWALLS ON THE EAST BANK OF THE BROOK
   - 6.5 INSTALL PRECAST CONCRETE BOX BEAMS AND DECK

PROCEED TO ROADWAY AND STORM WATER MANAGEMENT SYSTEM CONSTRUCTION AS FOLLOWS

CONSTRUCTION SCHEDULE

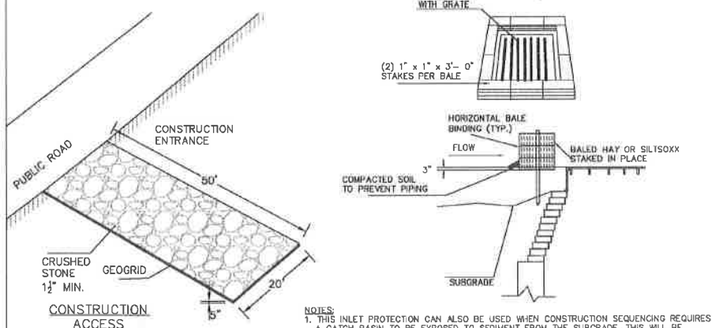
1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. FLAG WORK LIMITS
3. HOLD A PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.
4. INSTALL EROSION CONTROL DEVICES - SILT SOXX OR EQUAL ALONG THE LIMIT OF DISTURBANCE/CLEARING AS SHOWN ON THE PLAN
5. CONSTRUCT SEDIMENT TRAPS AS THE FIRST CONSTRUCTION ACTIVITY
6. INSTALL THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
7. CONSTRUCT THE LEVEL SPREADERS AND VEGETATE DISTURBED AREAS.
8. CLEAR AND GRUB HAMMERHEAD AREA AND AREAS FOR STORM WATER MANAGEMENT FACILITIES SWALE 1, SWALE 4.
9. COMPLETE SITE CLEARING
10. EXCAVATE HAMMERHEAD AREA SWALE 1, AND SWALE 4 TO ROUGH GRADE
11. ROUGH GRADE SITE, STOCKPILE TOPSOIL, ROUGH GRADE WQ SWALES AND DETENTION AREAS. CRIMP STRAW MULCH INTO DISTURBED AREAS AT THE RATE OF 2.5 TONS PER ACRE. FINISH THE SLOPES ALONG THE ROADWAY AS SOON AS ROUGH GRADING IS COMPLETE. LEAVE THE SURFACE SLIGHTLY ROUGHENED AND VEGETATE AND MULCH AS SOON AS POSSIBLE.
12. FINISH ROUGH GRADING SHARED DRIVEWAY AND INSTALL CATCH BASIN 3
13. FINISH TO GRADE AND CONSTRUCT WQ SWALE "A" AND DETENTION AREA "B", INCLUDING SWALE ON LOT 2 DISCHARGING INTO DETENTION AREA "A".
14. COMPLETE THE FINAL GRADING FOR THE ROAD, SHARED DRIVEWAY, AND APRONS INTO THE LOTS AND STABILIZE WITH GRAVEL.
15. COMPLETE THE FINAL GRADING OF GROUNDS, TOPSOIL, CRITICAL AREAS, AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH.
16. INSTALL PAVEMENT BINDER COURSE. AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS. ESTIMATED TIME BEFORE FINAL STABILIZATION IS 12 MONTHS.
17. INSTALL DRAINAGE, WATER, GAS.
18. LOAM AND SEED STORMWATER MANAGEMENT FACILITIES
19. DRAINAGE OUTLETS SHALL BE FUNCTIONING WITH EROSION CONTROL INSTALLED UPON COMPLETION
20. PROCEED WITH CONSTRUCTION OF THE DWELLING ON LOT 2

EROSION CONTROLS SHALL BE MAINTAINED DURING CONSTRUCTION TO ENSURE INTENDED PURPOSE. AFTER EACH RAIN STORM CONTROLS SHALL BE VERIFIED, AND REPAIRED IF NECESSARY.

SEDIMENT FOREBAYS MAY BE USED AS A SEDIMENT TRAPS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION SEDIMENT FOREBAYS SHALL BE CLEANED OF SEDIMENT, FINE GRADED AND LOAMED AND SEEDED AS PER PLANS

OPERATION AND MAINTENANCE PLAN FOR EROSION CONTROL MEASURES

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 12 INCHES BELOW THE RIM OF THE TRAP. UPON COMPLETION OF CONSTRUCTION ALL SEDIMENT SHALL BE REMOVED FROM TRAPS AND SEDIMENT TRAP ELEVATION SHALL BE BROUGHT TO DESIGN GRADE.
3. SEDIMENT WILL BE REMOVED FROM THE INLET PROTECTION DEVICES WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50 PERCENT FILLED
4. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 1/2 FOOT DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER
5. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE EROSION CONTROL PLANS AND/OR LANDSCAPING PLANS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.



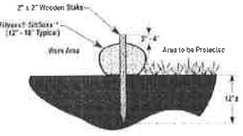
CONSTRUCTION ACCESS
N.T.S.

NOTES:
1. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
2. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

BALED HAY CATCH BASIN INLET PROTECTION
N.T.S.

Filtrexx® SiltSoxx™ Details

Filtrexx® SiltSoxx™ Plan View



Filtrexx® SiltSoxx™ Section

Notes:
1. All material to meet Filtrexx® specifications.
2. All Soxx™ compost/soil/rock seed fill to meet application requirements
3. SiltSoxx™ depth/fill to for maximum slopes. Greater slopes may require larger Soxx per the Engineer.
4. Compost material to be dispersed on site as determined by Engineer

1. FLOOD PLAIN INFORMATION. THESE PREMISES ARE SITUATED IN ZONE X (AREA DETERMINED TO BE OUTSIDE 0.2% CHANCE OF ANNUAL FLOODING) AS SHOWN ON MAP 25005C0204F, EFFECTIVE ON 07/07/2009.
2. WETLAND AND RIVERFRONT AREA DELINEATION WAS PERFORMED BY SITE SOLUTIONS INC. SURVEYED BY GORODETSKY ENGINEERING LLC, AND APPROVED BY SEEKONK CONSERVATION COMMISSION.

EROSION & SEDIMENTATION CONTROL PLAN

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

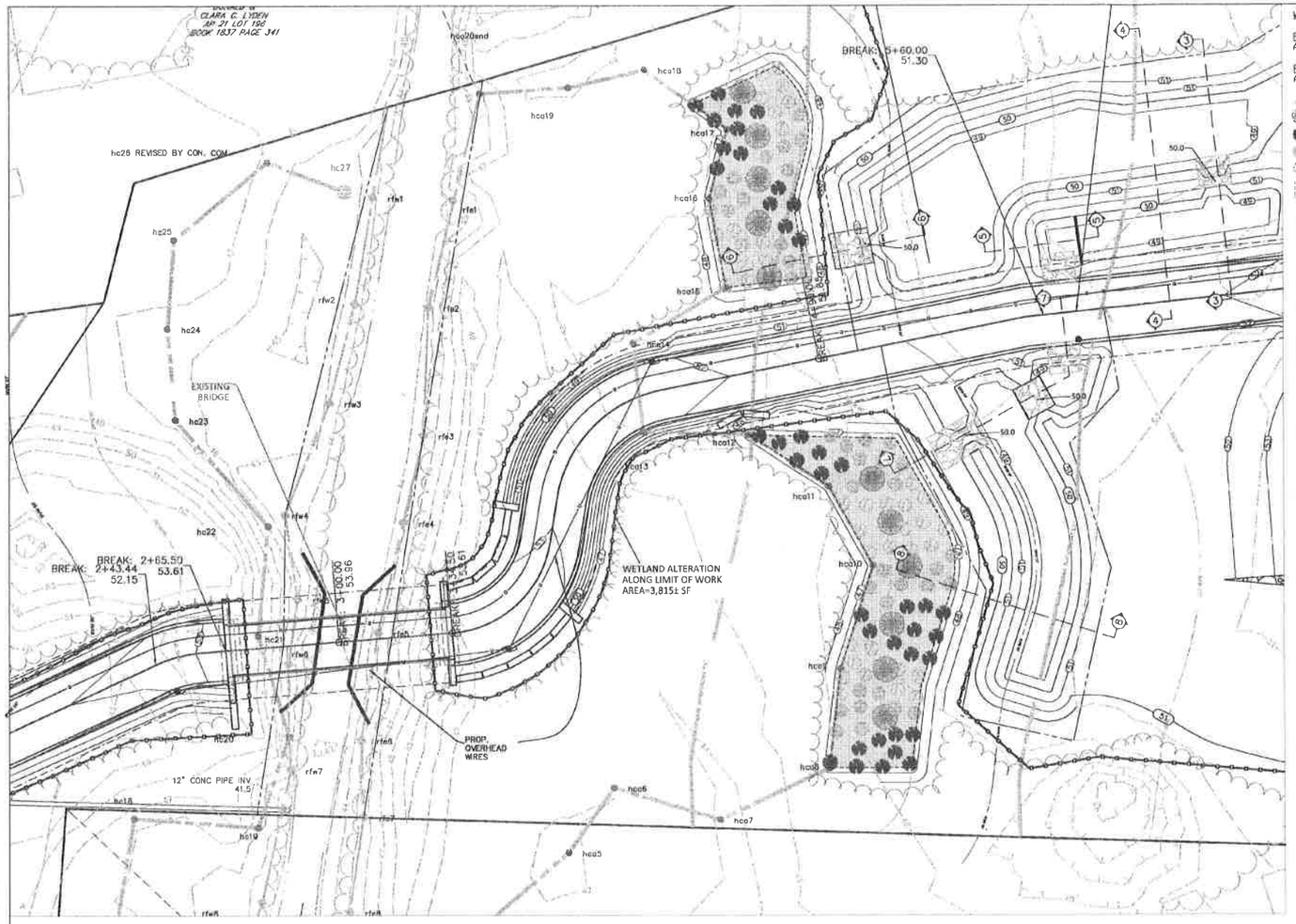
SHEET 6 OF 7

SCALE 1"=50' AND AS NOTED

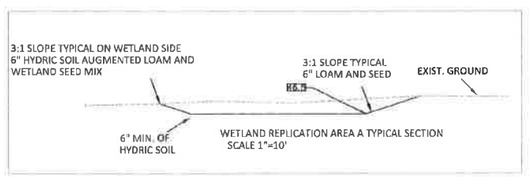
PREL M. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

PERFORMANCE SURETY IN THE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____, SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

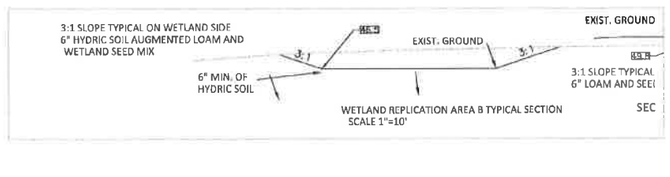
_____
CLERK



DETAIL OF WETLAND ALTERATION AND REPLICATION AREAS
SCALE 1"=20'



WETLAND REPLICATION AREA A TYPICAL SECTION
SCALE 1"=10'



WETLAND REPLICATION AREA B TYPICAL SECTION
SCALE 1"=10'

WETLAND ALTERATION AND REPLICATION SCHEDULE:

PROPOSED WETLAND ALTERATION:
AREA = 3,815 SQ. FT. (AREA UNDER BRIDGE SPAN IS NOT INCLUDED)

PROPOSED WETLAND REPLICATION:
AREA = 1,658 + 2,820 = 4,478 SQ. FT.

WETLAND REPLICATION AREA PLANTING SCHEDULE AND LEGEND

- RED MAPLE (ACER RUBRUM, FAC) – HEIGHT 4' TO 6' PLANTED 10'–15' O.C. 11 EA
- HIGH BUSH BLUEBERRY (VACCINIUM CORYMBOSUN FACW–) – HEIGHT 18" TO 24" PLANTED 6'–8' O.C. 40 EA
- SPICEBUSH (NORTHERN LINDERA BENZOIN FACW–) – HEIGHT 18" TO 24" PLANTED 6'–8' O.C. 40 EA
- WINTERBERRY (COMMON ILEX VERTICILLATA FACW+) – HEIGHT 18" TO 24" PLANTED 6'–8' O.C. 40 EA.
- GROUND COVER – SEE PLANTING NOTE

WETLAND REPLICATION AREA GROUND COVER PLANTING NOTE
APPLY NEW ENGLAND WETMIX (WETLAND SEED MIX) AS PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC
820 WEST ST AMHERST MA 01002 (413) 548–8000 WWW.NEWP.COM
APPLICATION RATE OF 1 (ONE) POUND PER 2,500 SF;
SEE ATTACHED MANUFACTURER'S SPECIFICATIONS FOR DETAILS.

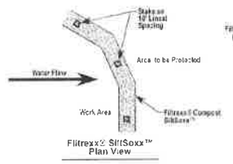
New England Wetmix (Wetland Seed Mix)

Botanical Name	Common Name	Indicator
Carex lurida	Lurid Sedge	OBL
Carex scoparia	Blunt Broom Sedge	FACW
Verbena hastata	Blue Vervain	FACW
Carex lupulina	Hop Sedge	OBL
Scirpus atrocinctus	Green Bulrush	OBL
Panicum rigidulum	Redtop Panic Grass	FACW+
Deschampsia cespitosa	Tufted Hairgrass	FACW
Bidens aristosa	Tickseed Sunflower/Bur Marigold	FACW
Eleocharis palustris	Creeping Spike Rush	OBL
Juncus effusus	Soft Rush	FACW+
Carex crinita	Fringed Sedge	OBL
Mimulus ringens	Square Stemmed Monkey Flower	OBL
Aster puniceus	Swamp Aster	OBL
Eupatorium perfoliatum	Boneset	FACW
Glyceria canadensis	Rattlesnake Grass	OBL
Asclepias incarnata	Swamp Milkweed	OBL
Helenium autumnale	Common Sneezeweed	FACW+
Penthorum sedoides	Ditch Stonecrop	OBL

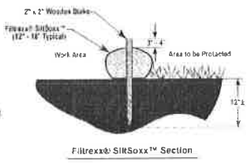
PRIOR TO ANY CONSTRUCTION LOCATION OF DRIVEWAY, REPLICATION AND ALTERAT ON AREAS, AND EROSION CONTROL LINES SHALL BE STAKED OUT AND APPROVED BY THE CONSERVATION COMMISSION.

CONSTRUCTION SEQUENCE:
1. INSTALL EROSION CONTROL AS SHOWN ON THE PLAN AND/OR AS DIRECTED BY THE CONSERVATION COMMISSION IN ORDER TO PROCEED WITH CONSTRUCTION.
2. EXCAVATE REPLICATION AREA 6" TO 8" BELOW THE PROPOSED GRADE.
3. EXCAVATE WETLAND AREAS TO BE FILLED AND TRANSFER AND SPREAD EXCAVATED MATERIAL INTO REPLICATION AREAS. EXCAVATED MATERIAL MAY BE AUGMENTED BY HYDRIC SOILS IF DIRECTED.
4. FINE GRADE WETLAND REPLICATION AREAS AND, IF REQUIRED, BRING HYDRIC SOIL IN ORDER TO MEET DESIGN FINISH GRADE AND IN ORDER TO PROVIDE AT LEAST 6" TO 8" OF TOP HYDRIC SOIL
5. PLANT WETLAND REPLICATION AREAS AS PER WETLAND REPLICATION DETAIL.
6. CONSTRUCT DRIVEWAY UP TO BROOK WEST BANK FOR CONSTRUCTION EQUIPMENT ACCESS. CLEARING LIMITS NEXT TO BROOK CROSSING MAY BE MODIFIED FOR CONSTRUCTION PURPOSES.
7. PROCEED TO OPEN BOX CULVERT CONSTRUCTION AS FOLLOWS:
   - 7.1. INSTALL FLOATING BOOM ALONG THE WATER EDGE
   - 7.2. INSTALL SILTSOXX INSIDE FLOATING BOOM; INSTALLATION TO BE APPROVED BY THE CONSERVATION COMMISSION
   - 7.3. MECHANICALLY EXCAVATE AND CAST IN PLACE CONCRETE FOOTINGS AND WINGWALLS ON THE WEST BANK OF THE BROOK
   - 7.4. HAND EXCAVATE AND CAST IN PLACE CONCRETE FOOTINGS AND WINGWALLS ON THE EAST BANK OF THE BROOK
   - 7.5. INSTALL PRE-CAST CONCRETE BOXBEAMS AND DECK

Filtrexx® SiltSoxx™ Details



Filtrexx® SiltSoxx™ Plan View



Filtrexx® SiltSoxx™ Section

Notes:
1. All material to meet Filtrexx® specifications.
2. SiltSoxx™ compost/soil backfilled fill to meet application requirements.
3. SiltSoxx™ depicted is for reinforcing slopes. Greater slopes may require larger socks per the Engineer.
4. Compost material to be dispersed on site, as determined by Engineer.

STREAM CROSSING STANDARDS

1. TYPE OF CROSSING
   - GENERAL: SPANS (BRIDGES, 3-SIDED BOX CULVERTS, OPEN-BOTTOM CULVERTS OR ARCHES) ARE STRONGLY PREFERRED.
   - OPTIMUM: USE A BRIDGE.
     BRIDGE IS PROPOSED.
2. EMBEDMENT
   - ALL CULVERTS SHOULD BE EMBEDDED (SUNK INTO STREAM) A MINIMUM OF 2 FEET, AND ROUND PIPE CULVERTS AT LEAST 25%.
   - IF PIPE CULVERTS CANNOT BE EMBEDDED THIS DEEP, THEN THEY SHOULD NOT BE USED.
   - WHEN EMBEDMENT MATERIAL INCLUDES ELEMENTS >15 INCHES IN DIAMETER, EMBEDMENT DEPTHS SHOULD BE AT LEAST TWICE THE D84 (PARTICLE WIDTH LARGER THAN 84% OF PARTICLES) OF THE EMBEDMENT MATERIAL.
     STANDARD DOES NOT APPLY. CULVERT IS NOT PROPOSED
3. CROSSING SPAN
   - GENERAL: SPANS CHANNEL WIDTH (A MINIMUM OF 1.2 TIMES THE BANKFULL WIDTH OF THE STREAM).
   - OPTIMUM: SPANS THE STREAMBED AND BANKS (AT LEAST 1.2 TIMES BANKFULL WIDTH) WITH SUFFICIENT HEADROOM TO PROVIDE DRY PASSAGE FOR WILDLIFE.
     BANKFULL WIDTH AT THE CROSSING = 51.6'
     PROPOSED SPAN = 63' - OUTSIDE THE STREAMBED AND BANKS; RATIO = 63'/51.6'=1.22
4. OPENNESS
   - GENERAL: OPENNESS RATIO (CROSS-SECTIONAL AREA/CROSSING LENGTH) OF AT LEAST 0.82 FEET (0.25 METERS). THE CROSSING SHOULD BE WIDE AND HIGH RELATIVE TO ITS LENGTH.
   - OPTIMUM: OPENNESS RATIO OF AT LEAST 1.64 FEET (0.5 METERS) AND MINIMUM HEIGHT OF 6 FEET. IF CONDITIONS SIGNIFICANTLY REDUCE WILDLIFE PASSAGE NEAR A CROSSING (E.G., STEEP EMBANKMENTS, HIGH TRAFFIC VOLUMES, AND PHYSICAL BARRIERS), MAINTAIN A MINIMUM HEIGHT OF 8 FEET (2.4 METERS) AND OPENNESS RATIO OF 2.46 FEET (0.75 METERS).
     PROPOSED CROSS-SECTIONAL AREA = 255 SF PROPOSED CROSSING
     LENGTH = 16'
     OPENNESS = CROSS-SECTIONAL AREA/CROSSING LENGTH = 15.9'
     HEIGHT = 8' - EXCEEDS HEIGHT OF THE UPSTREAM CULVERT AT SYKES ST
5. SUBSTRATE
   - NATURAL BOTTOM SUBSTRATE SHOULD BE USED WITHIN THE CROSSING AND IT SHOULD MATCH THE UPSTREAM AND DOWNSTREAM SUBSTRATES. THE SUBSTRATE AND DESIGN SHOULD RESIST DISPLACEMENT DURING FLOODS AND MAINTAIN AN APPROPRIATE BOTTOM DURING NORMAL FLOWS.
     NO CHANGE IN SUBSTRATE IS PROPOSED - CROSSING SPANS THE STREAM FROM OUTSIDE MAHW
6. WATER DEPTH AND VELOCITY
   - WATER DEPTHS AND VELOCITIES ARE COMPARABLE TO THOSE FOUND IN THE NATURAL CHANNEL AT A VARIETY OF FLOWS.
     NO CHANGE IN WATER DEPTH AND VELOCITIES IS EXPECTED - CROSSING SPANS THE STREAM FROM OUTSIDE MAHW AND FROM OUTSIDE BANKFULL ELEVATION

WETLAND ALTERATION, REPLICATION & STREAM CROSSING PLAN

SUBJECT TO ORDER OF CONDITIONS - STREAM CROSSING FOR DRIVEWAY AND SINGLE FAMILY RESIDENCE ONLY - BY SEEKONK CON COM BK 22072 PG 132
SEE PLANS ON FILE WITH CON. COM. FOR ADDITIONAL DETAILS

DEFINITIVE PLAN OF THE SUBDIVISION OF LAND IN THE TOWN SEEKONK, SITUATED OFF CURT STREET
ASSESSOR'S MAP 21 LOT 23 ZONING DISTRICT: R-2

DATE OF PLAN: JANUARY 18, 2016

OWNER/APPLICANT'S NAME AND ADDRESS:
JOSEPH VIEIRA, TRUSTEE
299 PROVIDENCE STREET, REHOBOTH, MA 02769 (508) 962-6749

ENGINEER: GORODETSKY ENGINEERING, LLC
422 NORTH MAIN STREET FALL RIVER MA (508)324-1163

SHEET 7 OF 7
SCALE AS NOTED

PRELIM. PLAN FILED	2015
DEF. PLAN FILED	2015
DEF. PLAN APPROVED	2015
DEF. PLAN ENDORSED	2015

PERFORMANCE SURETY IN THE AMOUNT OF _____ HAVING BEEN DEPOSITED WITH THE SEEKONK TOWN TREASURER TO ASSURE COMPLETION OF THE WAYS SHOWN ON THIS PLAN TO THE SATISFACTION OF THE SEEKONK PLANNING BOARD ON OR BEFORE _____ SAID SURETY HAVING BEEN POSTED ON _____, THIS PLAN OF SUBDIVISION IS APPROVED BY THE SEEKONK PLANNING BOARD.

_____
CLERK

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

MEMORANDUM

Date: February 9, 2016

To: Planning Board

From: John J. Aubin III, Town Planner

Re: Application for covenant release and setting of pre-acceptance contingency surety related to the public improvements associated with the **Girard Estates** definitive subdivision being AP 15 lot 83

The applicant is before the Planning Board upon requests for covenant release and the setting of a pre-acceptance contingency surety for the project in anticipation of formal acceptance of the roadway (Betty's Way) at the next Town Meeting. The applicant appeared before the Planning Board on April 14, 2015 regarding a request to eliminate street trees in the development. The applicant has complied with the Planning Board's request to obtain letters of non-objection from the residents in the development. The as-built plan for the development has been submitted by the project engineer together with documentation of completion of the other outstanding items related to the public improvements for the development.

The applicant is now requesting that the remaining covenant being held by the Planning Board on subdivision lot 7 be released and a 5% pre-acceptance contingency surety be substituted as provided for in the **Rule and Regulations Governing the Subdivision of Land in the Town of Seekonk**. The Department of Public Works has been made aware of the applications and a request for comment has been made. Based on the construction cost estimate for the development the 5% pre-acceptance contingency amount is $4099.41. should the Planning Board deem such action appropriate it is respectfully requested that the remaining covenant being held to insure the public improvements related to Betty's Way in the Conrad Girard residential development be released and a 5% contingency surety in the amount of $4099.41 be set.

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

MEMORANDUM

Date: February 9, 2016

To: Planning Board

From: John J. Aubin III, Town Planner

Re: Site plan application for **1727 Fall River Avenue** being AP 1 lot 20 located in an industrial zoning district

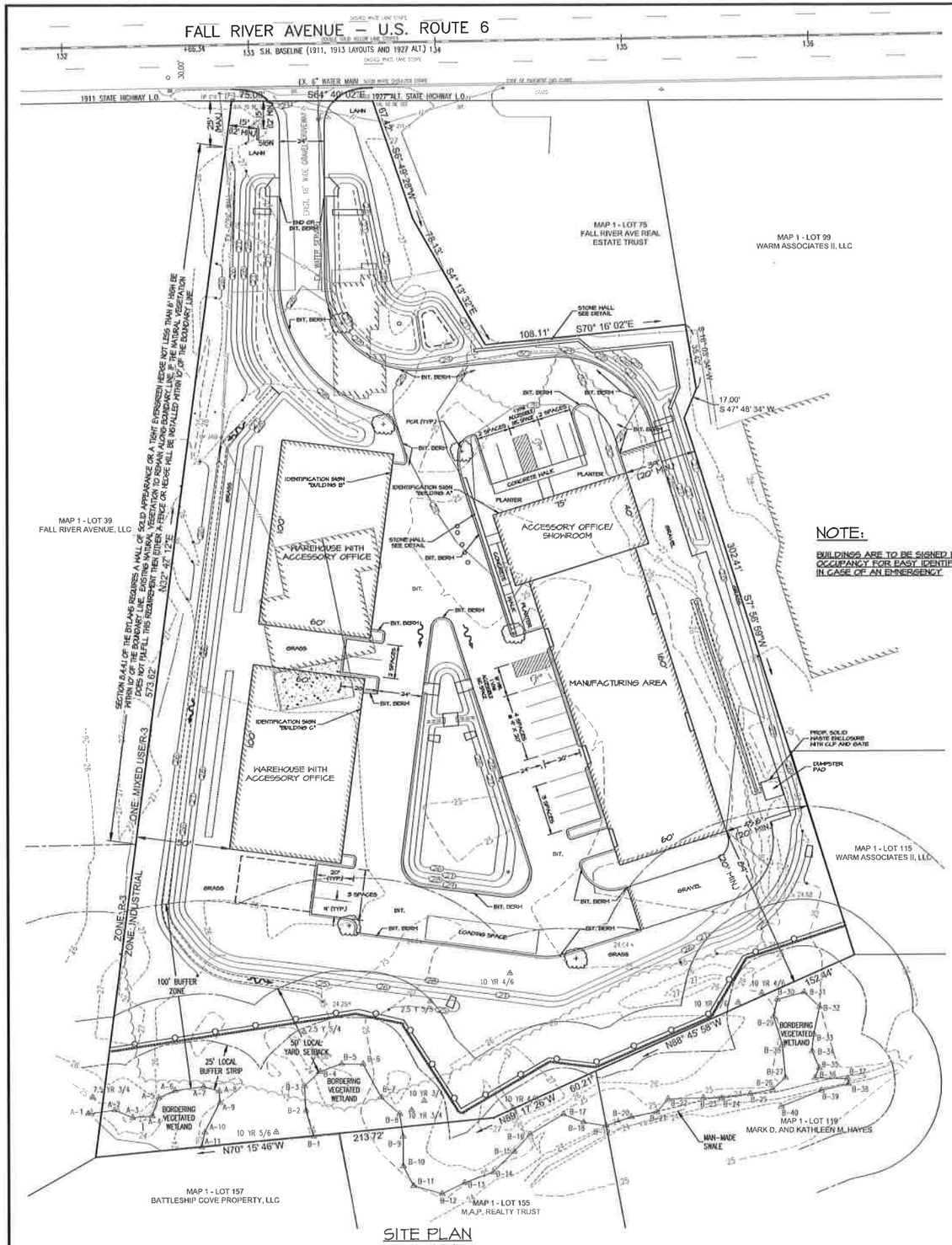
---

The applicant is before the Planning Board for a continued site plan review. The applicant has revised the plans in accordance with the comments generated during the staff and peer reviews. The revised plans and copies of the correspondence pertaining to the peer review are attached. The peer review engineer has made a request for additional construction notes however the design engineer has indicated that the requested mitigation measures are addressed in the operation and maintenance plan. During the peer review a specific condition was proposed with regard to Town inspection of the installation of the proposed bio-retention basin and trenches. In resolution of the matter there would appear to be two available approaches. The Planning Board could require the applicant retain the Board's inspecting engineer to inspect the work as requested in a fashion similar to public improvement related to a subdivision. An alternate condition would be the provision of a statement by the design engineer that the engineer was on-site during the excavations that the bio-retention basin and trenches were installed in accordance with the BMP detail specifications. In addition to the Planning Board's preference in addressing the above proposed condition; the following were previously recommended to be considered as part of any approval the Planning Board may deem appropriate to grant:

1. Approval of the proposed waste water treatment system by the Seekonk Board of Health;
2. Final Authorization for the notice of Intent or such other approvals as may be required by the Seekonk Conservation Commission;

3. Any future uses introduced to the site shall only be established or changed in accordance with the applicable provisions of the Seekonk Zoning By-Laws.
4. Such other conditions as the Planning Board deems appropriate to ensure that the proposed development meets the required site plan design standards as set forth in the **Town of Seekonk Zoning by-Laws.**

The application was also reviewed at the January 28, 2016, TRC meeting. During that review, no new comments were generated by the reviewing Town departments.

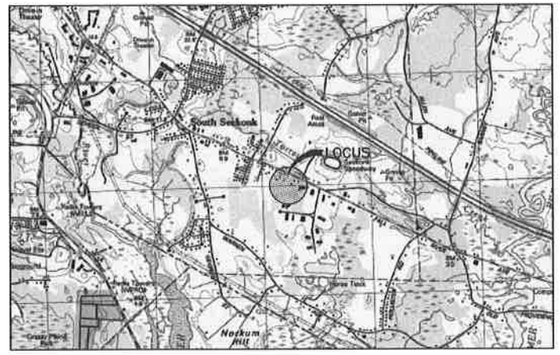


SITE PLAN
SCALE 1"=30'

N.

30 15 0 30 60
SCALE IN FEET

NOTE:
BUILDINGS ARE TO BE SIGNED PRIOR TO OCCUPANCY FOR EASY IDENTIFICATION IN CASE OF AN EMNERGENCY.



LOCATION MAP
SCALE: 1" = 2000'

PARKING SCHEDULE

PROPOSED MANUFACTURING/WAREHOUSE WITH ACCESSORY OFFICE/SHOWROOM

	MAX.	MIN.
EMPLOYEES 22 @ 2 PER EACH 3 (MAX.) / 1 PER EACH 3 (MIN.)	15 SPACES	7 SPACES
ACCESSORY OFFICES 2800 S.F. @ 1 PER 300 (MAX.) / 1 PER 500 S.F. (MIN.)	9 SPACES	6 SPACES
ACCESSORY SHOWROOM 1200 S.F. @ 1 PER 250 (MAX.) / 1 PER 500 S.F. (MIN.)	5 SPACES	2 SPACES
TOTAL SPACES MINIMUM ACCESSIBLE SPACES REQUIRED TOTAL PROPOSED SPACES: 18 INCLUDING 2 ACCESSIBLE SPACES LOADING SPACE: 1 LOADING SPACE	29 SPACES 2 SPACES	15 SPACES 1 SPACES

NOTE:
THIS PARKING PLAN COMPLIES WITH ARCHITECTURAL ACCESS BOARD PARKING AND PASSENGER LOADING ZONES REGULATIONS (521 CMR 23).

PLANTING SCHEDULE

PROPOSED TOTAL SPACES: 18
REQUIRED SHADED AREA
AREA PER PARKING SPACE - 9' X 20' = 180 S.F. PER SPACE
SHADED AREA - 30% OF PARKING AREA
SHADED AREA REQUIRED
18 SPACES X 180 S. F. x 30% = 972 S. F.
SHADE PROVIDED PER TREE
$(15)^2 \times A = 707$ S.F.
TREES REQUIRED
972 S. F. - 707 S. F. PER TREE = 1.4 ~ 2 TREES
PROPOSED TREES: 6

SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE
PCR	6	REDSPIRE PEAR	PYRUS CALLERYANA REDSPIRE	2 - 2.5" CAL B&B

SHEET SCHEDULE

SHEET NO.	SHEET TITLE	REVIEW/APPROVING AUTHORITY
LAYOUT-01	LAYOUT AND PARKING PLAN	PLANNING
LIGHT-01	LIGHTING PLAN	PLANNING
MASSHIGH-01	ACCESS PERMIT PLAN	MASS DOT
1 OF 5	EROSION & SEDIMENT CONTROL PLAN	CONSERVATION/PLANNING
2 OF 5	DRAINAGE AND GRADING PLAN	CONSERVATION/PLANNING
3 OF 5	SEWAGE DISPOSAL SYSTEM PLAN	BOARD OF HEALTH/CONSERVATION
4 OF 5	DRAINAGE & BMP DETAILS	CONSERVATION/PLANNING
5 OF 5	SEWAGE DISPOSAL SYSTEM DETAILS	BOARD OF HEALTH

LEGEND

-100-	EXISTING CONTOUR
-(100)-	PROPOSED CONTOUR
MA. STD.	MASSACHUSETTS STANDARD
INV.	INVERT OF PIPE
P. V. C.	POLYVINYL CHLORIDE PIPE
S. D. R.	STANDARD DIMENSION RATIO
R. C. P.	REINFORCED CONCRETE PIPE
H. D. P. E.	HIGH DENSITY POLYETHYLENE PIPE
R. D.	EXISTING ROOF DRAIN
CONC.	CONCRETE (BIT. OR P. C.)
BIT.	BITUMINOUS
P. C.	PORTLAND CEMENT
TYP.	TYPICAL
F.G. 100x00	FINISHED SPOT GRADE
100x00	EXISTING SPOT GRADE
T. C.	TOP OF CURB
B. C.	BOTTOM OF CURB
P. L.	PROPERTY LINE
-x-CLF-x-	CHAIN LINK FENCE
	DEEP OBSERVATION HOLE
	PERCOLATION TEST HOLE

LOT INFORMATION

ASSESSORS PLAT 1 - LOT 20
AREA: 4.43 ACRES
DEED BOOK: 22,145 - PAGE: 287
OWNER:
PMI REALTY, LLC
1960 FALL RIVER AVENUE
SEEKONK, MA 02771
SITE ADDRESS:
1727 FALL RIVER AVENUE
SEEKONK, MA 02771
ZONE: INDUSTRIAL

YARD SETBACK REQUIREMENTS:
FRONT: 50'
SIDE: 20'
MAXIMUM HEIGHT: 3 STORIES OR 40'
MAXIMUM LOT COVERAGE BY BUILDING: 50%

COMMONWEALTH OF MASSACHUSETTS ANTHONY A. CAPUTO No. 29640 REGISTERED LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS ALLAN L. BASLER CIVIL No. 35208 REGISTERED PROFESSIONAL ENGINEER

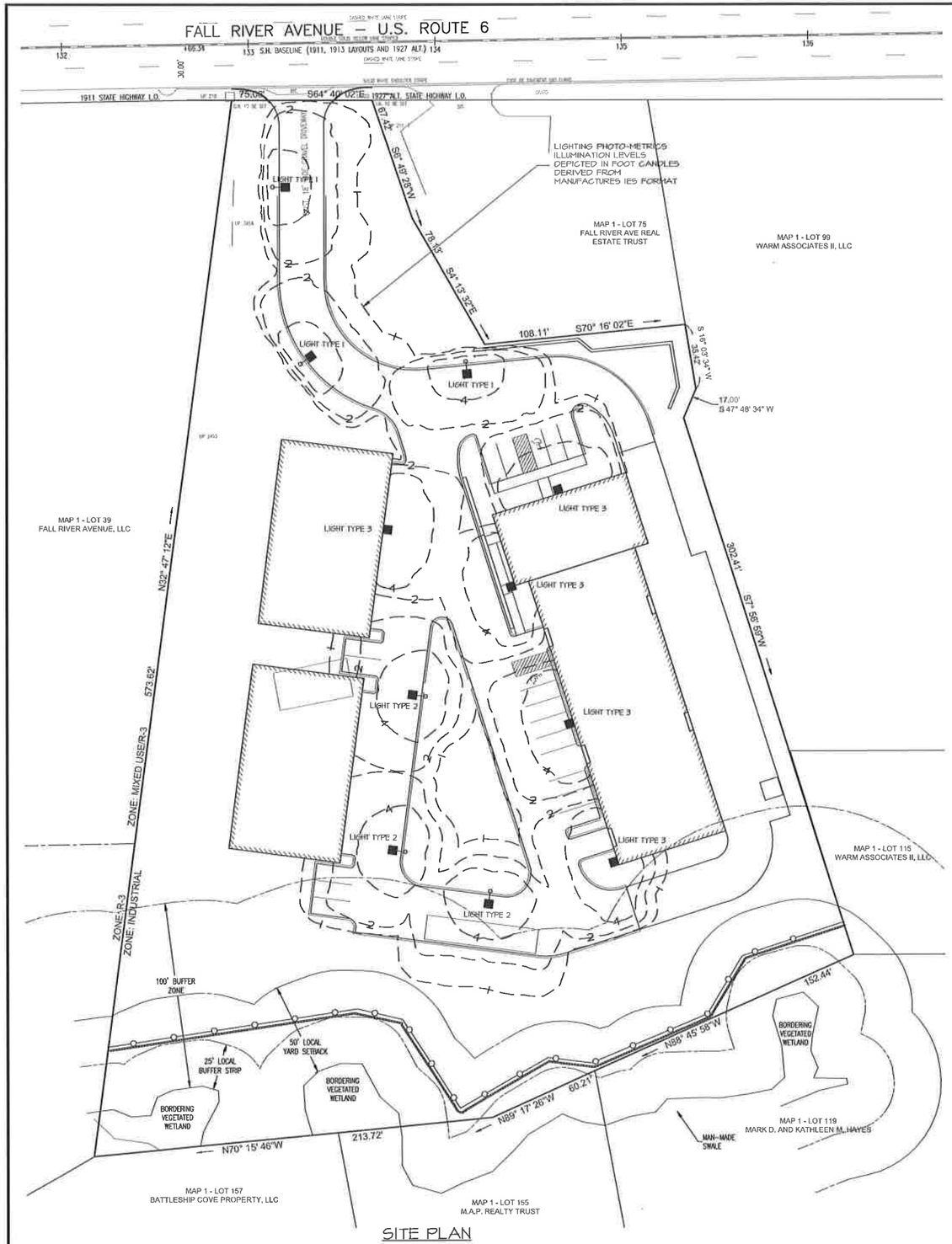
REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016

LAYOUT and PARKING PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

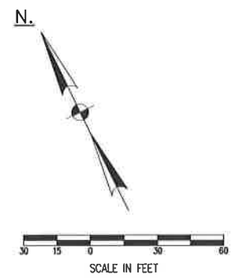
CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1170 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel.: 401-433-4440 MARLCOMMONWEALTH.NET
Fax: 401-434-1615 WWW.CWLTD.NET

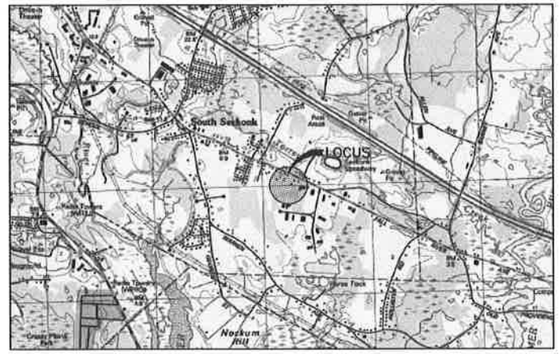
DATE: NOVEMBER 2, 2015
SHEET: LAYOUT-01

J:\Massachusetts\Seekonk\Civil\working\20150113.00 MA Seekonk MA Fall River Ave 1727 PMI Realty\20150113.00 MA Seekonk Fall River Avenue 1727 PMI Realty -rev 2 jan 29 2016.dwg



SITE PLAN
SCALE 1"=30'





LOCATION MAP
SCALE: 1" = 2000'

SITE LIGHTINIG SCHEDULE

TYPE	MODEL	MOUNT	HEIGHT	QUANTITY
1	ASA-16061-530-4L	POLE	20'	3
2	ASA-16061-530-4L-HSS	POLE	20'	3
3	ASA-16061-530-4L	BUILDING	16'	5

LIGHTING IS PHILIPS GRADCO AEROSPACE PRODUCT LINE.

COMMONWEALTH OF MASSACHUSETTS
ALLAN L. SHEAR
CIVIL
No. 31250
PROFESSIONAL ENGINEER

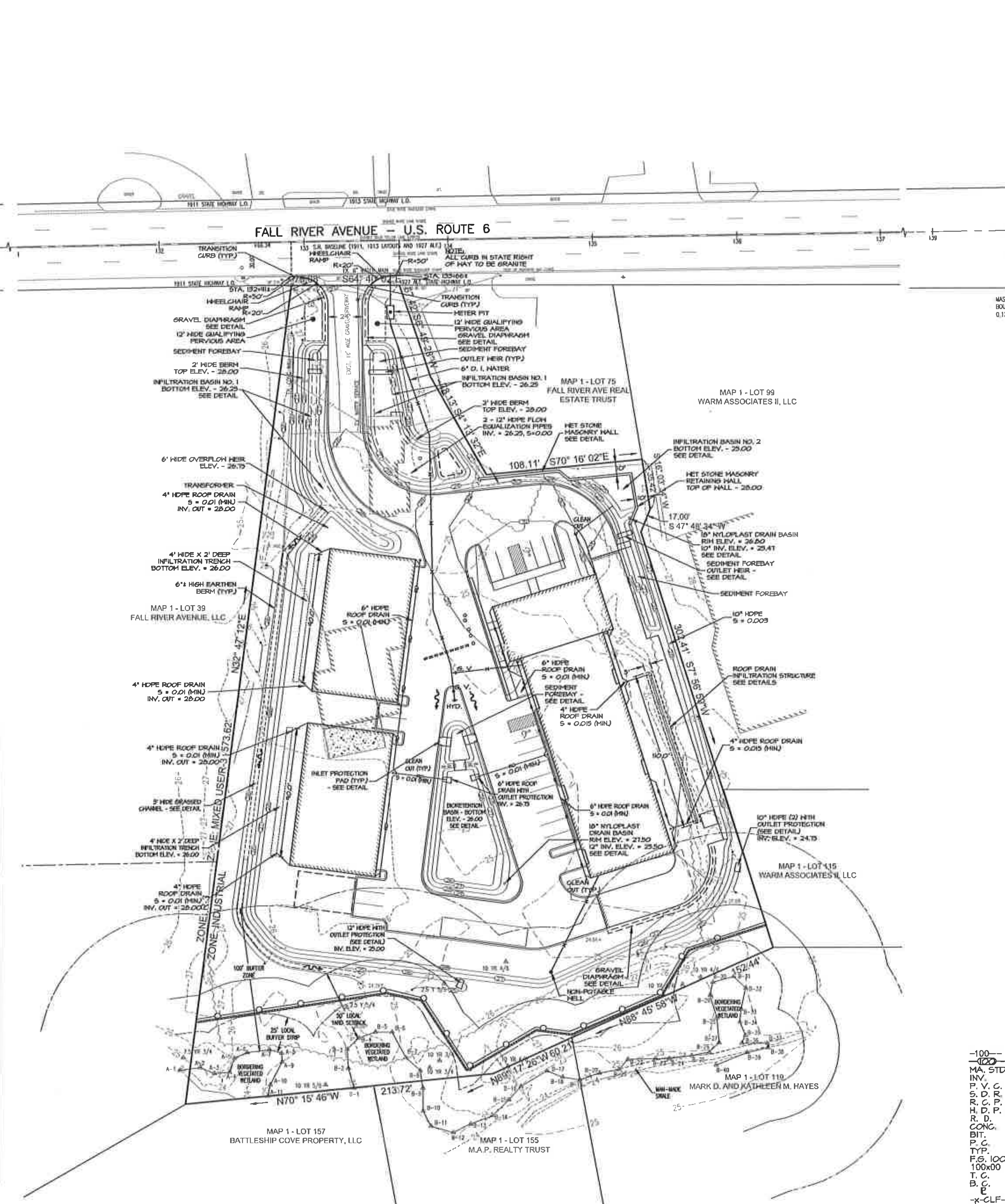
REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016

LIGHTING PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

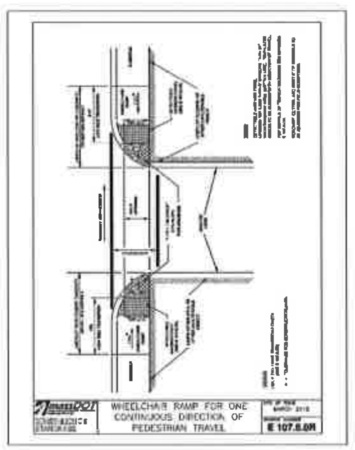
CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering,
Environmental Services, Traffic Engineering
and Construction Engineering
1150 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel.: 401-434-8510
Fax.: 401-434-8693
MAIL@CWLTD.NET
WWW.CWLTD.NET

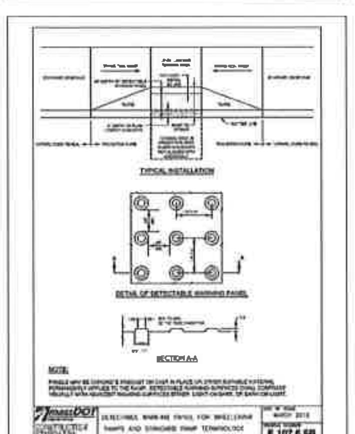
DATE
NOVEMBER 2, 2015

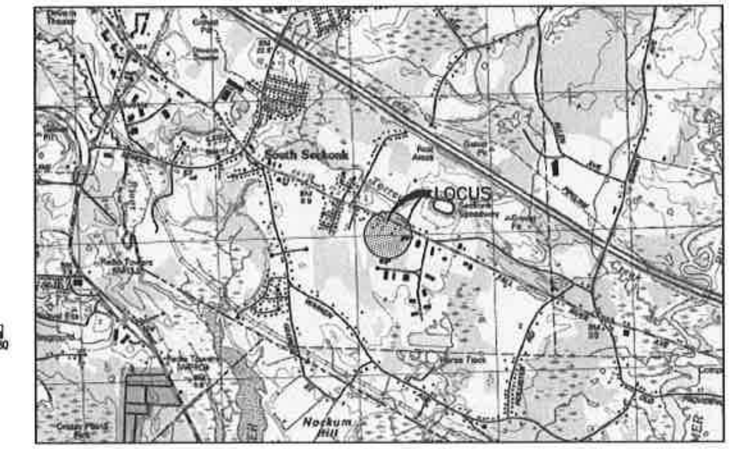
SHEET
LIGHT-01



SITE PLAN
SCALE 1"=40'







LOCATION MAP
SCALE: 1" = 2000'

PARKING SCHEDULE

PROPOSED MANUFACTURING/WAREHOUSE WITH ACCESSORY OFFICE/SHOWROOM

	MAX.	MIN.
EMPLOYEES 22 @ 2 PER EACH 3 (MAX.) / 1 PER EACH 3 (MIN.)	15 SPACES	7 SPACES
ACCESSORY OFFICES 2800 S.F. @ 1 PER 300 (MAX.) / 1 PER 500 S.F. (MIN.)	9 SPACES	6 SPACES
ACCESSORY SHOWROOM 1200 S.F. @ 1 PER 250 (MAX.) / 1 PER 500 S.F. (MIN.)	5 SPACES	2 SPACES
TOTAL SPACES	29 SPACES	15 SPACES
MINIMUM ACCESSIBLE SPACES REQUIRED	2 SPACES	1 SPACES

TOTAL PROPOSED SPACES: 18 INCLUDING 2 ACCESSIBLE SPACES
LOADING SPACE: 1 LOADING SPACE

NOTE:
THIS PARKING PLAN COMPLIES WITH ARCHITECTURAL ACCESS BOARD PARKING AND PASSENGER LOADING ZONES REGULATIONS (521 CMR 23).

LEGEND

-100--	EXISTING CONTOUR
-(100)-	PROPOSED CONTOUR
MA. STD.	MASSACHUSETTS STANDARD
INV.	INVERT OF PIPE
P. V. C.	POLYVINYL CHLORIDE PIPE
S. D. R.	STANDARD DIMENSION RATIO
R. C. P.	REINFORCED CONCRETE PIPE
H. D. P. E.	HIGH DENSITY POLYETHYLENE PIPE
R. D.	EXISTING ROOF DRAIN
CONC.	CONCRETE (BIT. OR P. C.)
BIT.	BITUMINOUS
P. C.	PORTLAND CEMENT
TYP.	TYPICAL
F.G. 100x00	FINISHED SPOT GRADE
100x00	EXISTING SPOT GRADE
T. C.	TOP OF CURB
B. C.	BOTTOM OF CURB
℄	PROPERTY LINE
-x-CLF-x-	CHAIN LINK FENCE
	DEEP OBSERVATION HOLE
	PERCOLATION TEST HOLE

LOT INFORMATION
ASSESSORS PLAT 1 - LOT 20
AREA: 4.43 ACRES
DEED BOOK: 22,145 - PAGE: 287
OWNER:
PMI REALTY, LLC
1960 FALL RIVER AVENUE
SEEKONK, MA 02771
SITE ADDRESS:
1727 FALL RIVER AVENUE
SEEKONK, MA 02771
ZONE: INDUSTRIAL

YARD SETBACK REQUIREMENTS:
FRONT: 50'
SIDE: 20'
MAXIMUM HEIGHT: 3 STORIES OR 40'
MAXIMUM LOT COVERAGE BY BUILDING: 50%

COMMONWEALTH OF MASSACHUSETTS — ANTHONY A. CAPUTO — No. 29640 — REGISTERED LAND SURVEYOR

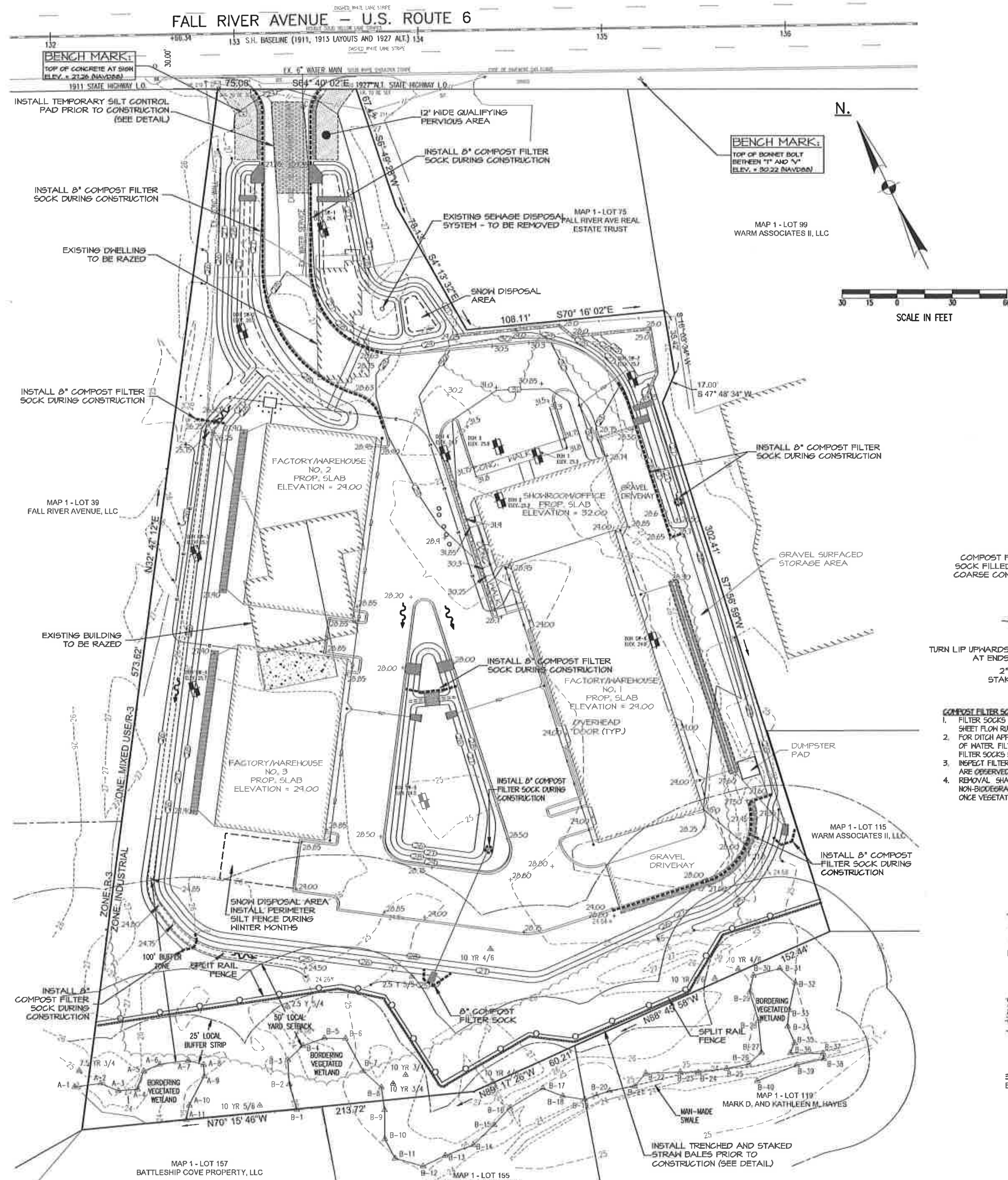
COMMONWEALTH OF MASSACHUSETTS — ALLAN L. SHEER — CIVIL — No. 35256 — REGISTERED PROFESSIONAL ENGINEER

REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016

ACCESS PERMIT PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

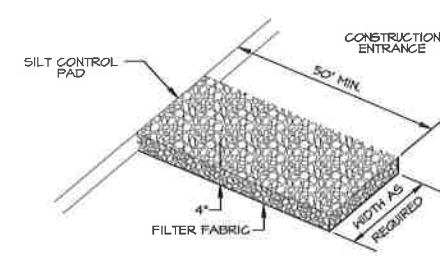
CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1150 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel.: 401-434-8880
Fax: 401-434-1615
MAIL@CWLTD.NET
WWW.CWLTD.NET

DATE: NOVEMBER 2, 2015
SHEET: MASSHIGH-01



SITE PLAN

SCALE 1"=30'



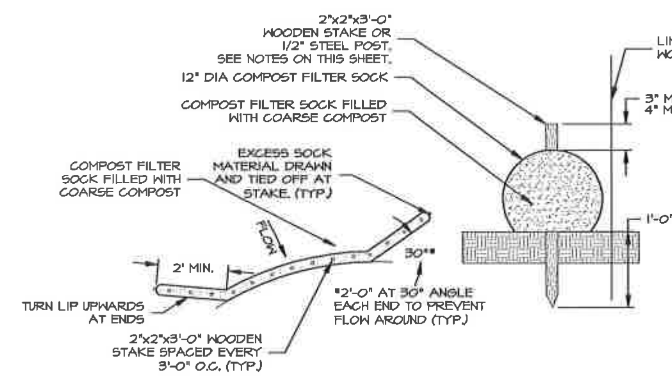
MATERIALS SIZE

SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO.2	ASTM C-33 NO.3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	0-5
3/8 INCH	-	-	-

NOTE:
SILT CONTROL PAD TO BE INSTALLED AND MAINTAINED IN CONFORMANCE WITH MASSACHUSETTS DOT STANDARDS AND TO THE SATISFACTION OF THE DESIGN ENGINEER AND THE TOWN OF SEEKONK BUILDING INSPECTOR, DEPARTMENT OF PUBLIC WORKS, PLANNING BOARD AND CONSERVATION COMMISSION.

TEMPORARY SILT CONTROL PAD

NOT TO SCALE

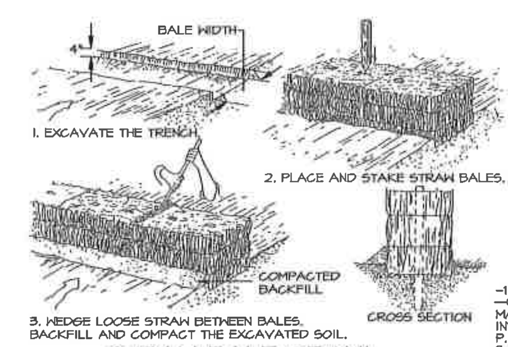


COMPOST FILTER SOCK GENERAL NOTES

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF AND SEDIMENT PER THESE NOTES AND COMPOST FILTER SOCK DETAILS, PLANS, AND SPECIFICATIONS.
2. FOR DITCH APPLICATIONS, MINIMUM INSTALLED HEIGHT OF SINGLE SOCK NOMINALLY. SOCKS ARE PLACED PERPENDICULAR TO FLOW OF WATER. FILTER SOCKS SHALL CONTINUE UP SIDE SLOPES TO TOP OF BANK OR MAXIMUM 3 FEET ABOVE INSTALLED HEIGHT. FILTER SOCKS SHALL REMAIN IN PLACE UNTIL ALL UPSTREAM AREAS ARE PERMANENTLY STABILIZED.
3. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.
4. REMOVAL SHALL BE ACCOMPLISHED BY CUTTING SOCK OPEN AND SPREADING THE FILL MATERIAL ON THE SITE. ALL NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED. FILTER SOCKS APPLIED IN DITCHES SHALL BE COMPLETELY REMOVED ONCE VEGETATION IS ESTABLISHED.

COMPOST FILTER SOCK

NOT TO SCALE



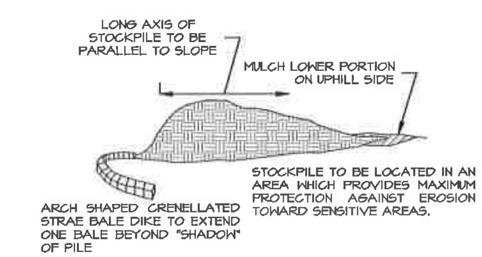
STRAW BALE DETAIL

EROSION AND SEDIMENTATION CONTROL

1. ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF EARTHWORK AT THE SPECIFIC AREAS INDICATED ON THE PLANS. VEGETATIVE CLEARING MAY OCCUR PRIOR TO INSTALLATION OF SUCH CONTROLS, BUT NO GRUBBING, GRADING, FILLING, OR OTHER SOIL DISTURBANCE SHALL OCCUR PRIOR TO CONTROL INSTALLATION.
2. ALL PERIMETER EROSION AND SEDIMENTATION CONTROLS MUST BE PROPERLY MAINTAINED AND MUST REMAIN IN PLACE UNTIL SOILS HAVE STABILIZED TO THE SATISFACTION OF THE TOWN OF SEEKONK. CONTROLS ARE TO BE INSPECTED WEEKLY AND IMMEDIATELY FOLLOWING ALL PRECIPITATION EVENTS THAT INCLUDE RAINFALL OF 0.1" OR MORE.
3. THE ENGINEER OR TOWN REPRESENTATIVE RESERVES THE RIGHT TO SPECIFY ADDITIONAL CONTROLS AS CONDITIONS MAY WARRANT. ACCESSIBLE RESERVES OF STRAW BALES AND STAKES ARE TO BE MAINTAINED ON SITE FOR ROUTINE MAINTENANCE AND IN THE EVENT OF UNANTICIPATED PROBLEMS REQUIRING IMMEDIATE RESPONSE.
4. THE TOE OF FILL SLOPES SHALL REMAIN AT LEAST ONE FOOT INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE EROSION CONTROLS BE COVERED WITH FILL MATERIAL. ANY FILL MATERIAL THAT IS PLACED ON OR AGAINST EROSION CONTROLS SHALL BE IMMEDIATELY REMOVED.
5. ALL STRAW BALES ARE TO BE INSTALLED IN ACCORDANCE WITH THE DETAILS. THEY SHALL BE DOUBLE STAKED AND INSTALLED WITH THE LOWER 4 INCHES BURIED AND BACK FILLED WITH COMPACTED SOIL MATERIAL.
6. STRAW BALE CHECK DAMS ARE TO BE INSTALLED AT ANY AREA WHERE STORM WATER HAS THE OPPORTUNITY TO DRAIN AND SCOUR ALONG THE TOE OF NEWLY-CREATED SLOPES LOCATED INSIDE THE PERIMETER STRAW BALES.
7. A CONTINUOUS LINE OF STAKED, UNTRENCHED STRAW BALES SHALL BE INSTALLED AT THE TOE OF THE INFILTRATION BASIN BERMS IMMEDIATELY FOLLOWING FINAL GRADING, INSTALLATION OF THE PERMEABLE BASIN FLOOR, AND SIDE-SLOPE LOAMING (LOAMING IS TO OCCUR IMMEDIATELY FOLLOWING FINAL GRADING). THE BALES MUST BE INSTALLED AROUND THE FLOOR PERIMETER SUCH THAT THEY COMPLETELY PROTECT THE INFILTRATION AREA.
8. SOIL STOCKPILES TO REMAIN IDLE MORE THAT 30 CALENDAR DAYS ARE TO BE RINGED WITH EITHER SILT FENCE OR STAKED STRAW BALES AND SEEDED WITH A CONSERVATION GRASS MIX.
9. ANY DISTURBED SOILS NOT DESIGNATED FOR OTHER SURFACE TREATMENT ARE TO BE LOAMED (4 INCHES) AND SEEDED IMMEDIATELY FOLLOWING FINAL GRADING.
10. APPROPRIATE PRECAUTIONS SHOULD BE TAKEN TO PREVENT CONSTRUCTION EQUIPMENT FROM TRACKING SOIL BEYOND PROJECT LIMITS. TEMPORARY CRUSHED-STONE CONSTRUCTION ENTRANCES ARE TO UTILIZED TO CONTROL SUCH TRACKING. STONE IS TO BE REPLACED ROUTINELY WHEN IT BECOMES LADEN WITH SOIL AND LOOSES IT EFFECTIVENESS.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROPER EROSION CONTROL BOTH ON AND OFF SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE CONTROLS ARE SPECIFIED ON THE SITE PLAN.
12. NO WORK IS TO OCCUR ON THE WETLAND SIDE OF THE PERIMETER EROSION AND SEDIMENTATION CONTROLS. ALL PERIMETER CONTROLS SERVE AS THE PROJECT LIMITS OF DISTURBANCE.
13. NO STONES, BRUSH, CONSTRUCTION DEBRIS, LITTER, OR OTHER MATERIALS ARE TO BE DEPOSITED ON THE WETLAND SIDE OF THE PERIMETER EROSION AND SEDIMENTATION CONTROLS.
14. THE SPLIT RAIL FENCE SERVES AS THE LIMIT OF LAWN AND FUTURE YARD ACTIVITIES AND SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION.

SEEDING AND LANDSCAPING:

1. LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE AFTER GENERAL CONSTRUCTION OPERATIONS IN ORDER TO PROVIDE PERMANENT STABILIZATION OF DISTURBED SURFACES.
2. THE CONTRACTOR SHALL UTILIZE SLOPE STABILIZATION METHODS AND MATERIALS THAT MAY BE ADJUSTED TO VARYING SITE CONDITIONS. EROSION CONTROL BLANKETS OR MIRAFI MIRAMET (OR SIMILAR PRODUCTS) SHALL BE MADE AVAILABLE ON SITE FOR EMERGENCY USE.
3. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT PERMIT PROPER GROWTH OF VEGETATION, TEMPORARY MULCHING WITH STRAW OR OTHER METHODS SHALL BE PROVIDED.
4. ALL DISTURBED SURFACES TO BE PLANTED SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL WITH THE SURFACE SMOOTHED TO THE SPECIFIED GRADES.
5. SEED APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS.



TEMPORARY STOCKPILE

NOT TO SCALE

LEGEND

-100-	EXISTING CONTOUR
-(100)-	PROPOSED CONTOUR
MA. STD.	MASSACHUSETTS STANDARD
INV.	INVERT OF PIPE
P. V. C.	POLYVINYL CHLORIDE PIPE
S. D. R.	STANDARD DIMENSION RATIO
R. C. P.	REINFORCED CONCRETE PIPE
H. D. P. E.	HIGH DENSITY POLYETHYLENE PIPE
R. D.	EXISTING ROOF DRAIN
CONC.	CONCRETE (BIT. OR P. C.)
BIT.	BITUMINOUS
P. C.	PORTLAND CEMENT
TYP.	TYPICAL
F.G. 100x00	FINISHED SPOT GRADE
100x00	EXISTING SPOT GRADE
T. C.	TOP OF CURB
B. C.	BOTTOM OF CURB
ℙ	PROPERTY LINE
-x-CLF-x-	CHAIN LINK FENCE
	DEEP OBSERVATION HOLE
	PERCOLATION TEST HOLE

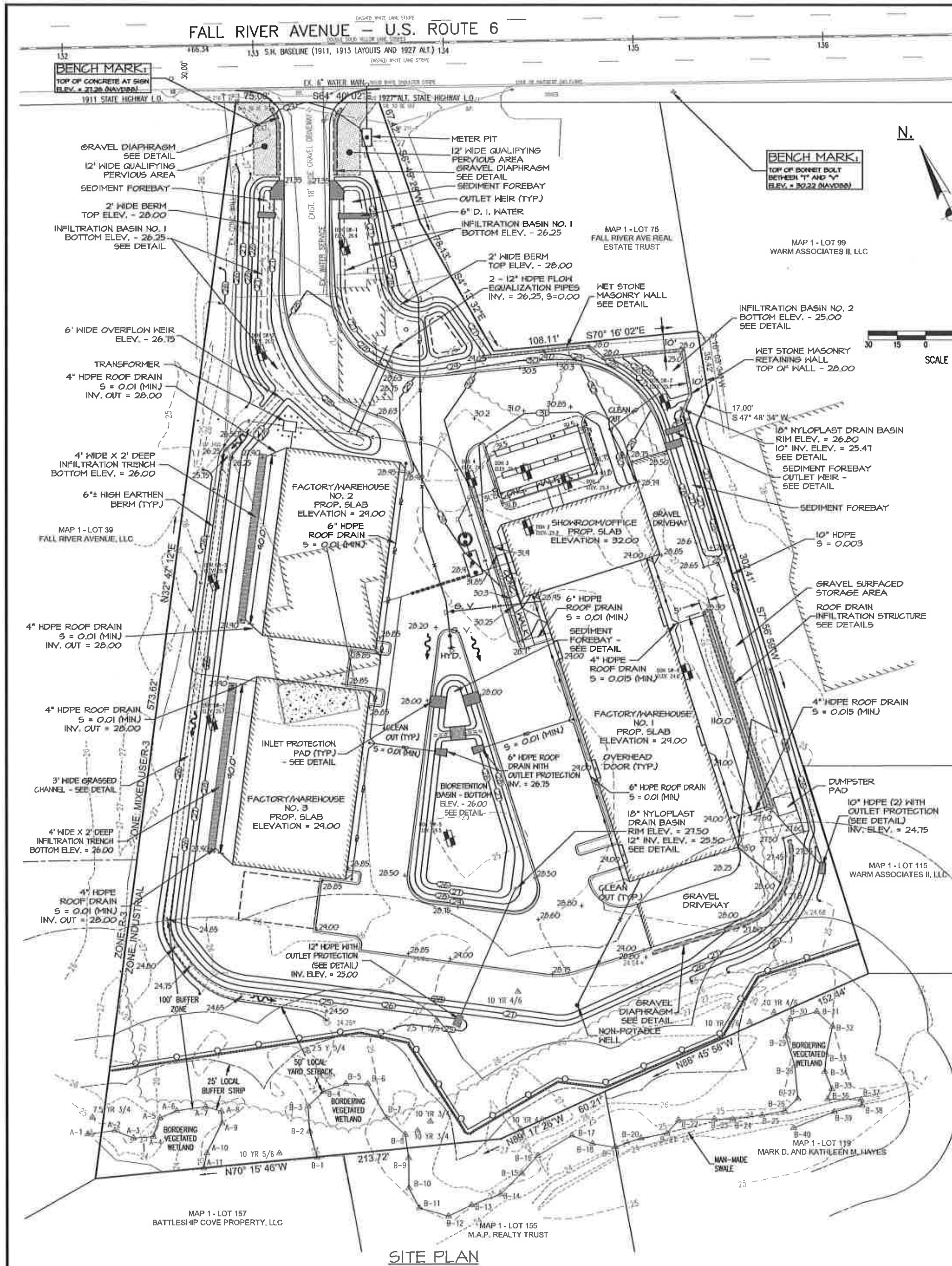
REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016
REV.: NOVEMBER 2, 2015

EROSION & SEDIMENT CONTROL PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1150 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel.: 401-434-8880
Fax: 401-434-1615
MAIL@CWLTD.NET
WWW.CWLTD.NET

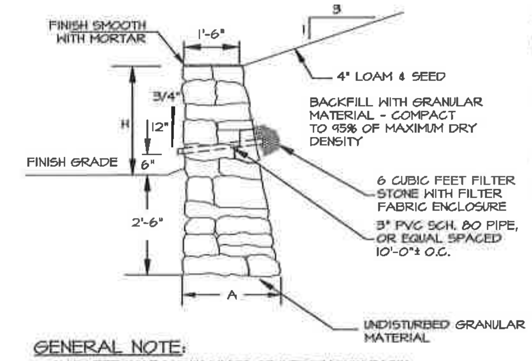
DATE: OCTOBER, 2015

SHEET: 1 OF 5



SITE PLAN

SCALE 1"=30'



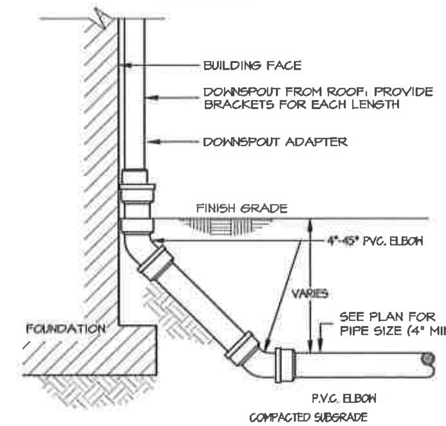
GENERAL NOTE:

1. OMIT WEEP HOLE WITHIN LIMITS OF INFILTRATION BASIN.
2. ALL EXPOSED SURFACES MUST BE DRESSED
3. JOINTS SHALL NOT EXCEED 1" IN WIDTH.
4. POINTING OF JOINTS ON TOP OF WALL SHALL BE FLUSH AND PITCHED TO DEFLECT WATER OFFF OF THE WALL.
5. DRESS 6" BELOW GRADE FOR FRONT FACE OF WALL.

DIMENSION	
H	A
2'-0"	3'-3"
3'-0"	3'-8"
4'-0"	4'-1"
5'-0"	4'-6"

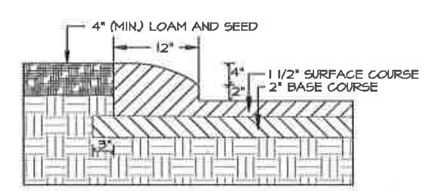
WET STONE MASONRY RETAINING WALL

NOT TO SCALE



DOWNSPOUT DETAIL

NOT TO SCALE



DETAIL - BITUMINOUS BERM

NOT TO SCALE

SITE CONSTRUCTION NOTES:

GENERAL CONSTRUCTION REQUIREMENTS:

THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL. THIS OPERATION SHALL INCLUDE SWEEPING ALL PAVED SURFACES LOCATED IN THE SITE AREA AND ANY OFF-SITE AREAS THAT ARE IMPACTED BY SITE CONSTRUCTION ON A REGULAR BASIS. ONLY CLEAN, POTABLE WATER SHALL BE USED TO CONTROL DUST. CHEMICAL DUST SUPPRESSANTS SHALL NOT BE USED.

GENERAL CONSTRUCTION NOTES

1. THE LOCATION AND DEPTH OF EXISTING UTILITIES HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
2. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND ANY COSTS ASSOCIATED WITH THE REPAIR OF DAMAGED UTILITIES SHALL BE THE CONTRACTORS RESPONSIBILITY WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL UTILITY COMPANIES, STATE AND/OR TOWN DEPARTMENTS WHOSE FACILITIES MAY BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY THE STATE OF MASSACHUSETTS AND THE TOWN OF SEEKONK PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
4. ALL SITE WORK, INCLUDING, BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, GRAVEL, DRAINAGE PIPE AND STRUCTURES, WATER LINE INSTALLATION, PAVEMENT SAWCUTTING, ETC. SHALL CONFORM TO THE MASSACHESETTS HIGHWAY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1995 EDITION (WITH LATEST ADDENDA) AND REGULATIONS OF THE SEEKONK WATER DISTRICT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS TO INCLUDE BUT NOT LIMITED TO, TREES, STUMPS, UNSUITABLE MATERIAL, BUILDING DEMOLITION MATERIAL, FOUNDATIONS, BITUMINOUS PAVEMENT, ETC.
6. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE, AND MAINTAIN ALL PUMPS, DRAINS, WELL POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
7. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES AND/OR WETLAND AREAS.
8. ALL DISTURBED AREAS OUTSIDE THE PROPOSED PAVEMENT AREAS SHALL RECEIVE A MINIMUM 4-INCHES OF LOAM AND SEED.
9. UNLESS OTHERWISE NOTED, ALL DRAINAGE PIPE WILL BE HIGH DENSITY POLYETHYLENE (HDPE), SMOOTH INTERIOR, AND UNLESS NOTED OTHERWISE, ALL DRAINAGE STRUCTURES SHALL CONFORM TO THOSE INDICATED ON THE PLANS AND THE TOWN OF SEEKONK AND MASS HIGHWAY STANDARDS.
10. ANY ITEMS OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE PROJECT. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
11. WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS AND THE SEEKONK WATER DISTRICT.
12. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT SHALL REMAIN ON SITE AND MUST BE ADHERED TO THROUGH ALL STAGES OF WORK. SITE MONITORING AND REPORTING SHALL BE AS SPECIFIED ON THESE SITE DRAWINGS, IN THE SWPPP PLAN, AND IN ACCORDANCE WITH APPLICABLE REGULATIONS. WATERSHED MAPPING IN THE SWPPP ILLUSTRATES SITE FLOW PATTERNS. THE SWPPP ALSO PROVIDES THE STORMWATER FIELD OBSERVATION REPORT FORM THAT MUST BE USED FOR THE PROJECT.
13. SEE SHEET 4 FOR ADDITIONAL CONSTRUCTION NOTES.

STORMWATER DEEP OBSERVATION HOLE 1
GROUND ELEVATION – 26.4

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 40"	FILL	SANDY LOAM			MASSIVE	FRIABLE	GRAVELLY, COBBLY
40" – 48"	O	SANDY LOAM	10 YR 3/1		MASSIVE	WEAK FRIABLE	ROOTS
48" – 70"	Cd1	FINE S. LOAM	2.5 Y 5/2	@48" –MANY, PROM., COARSE	MASSIVE	FRIABLE	
70" – 104"	C2	MED-CRS SAND	10 YR 4/6		SINGLE GR.	LOOSE	

STANDING WATER 87" WEEPING WATER 84" ESTIMATED SEASONAL HIGH GW – 48" (ELEV. = 22.4)

STORMWATER DEEP OBSERVATION HOLE 2
GROUND ELEVATION – 26.0

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 26"	FILL	SANDY LOAM					
26" – 37"	Cd1	F. SANDY LOAM	2.5 Y 5/2	@28" –MANY, PROM., COARSE	MASSIVE	FRIABLE	
37" – 80"	C2	MED. SAND	2.5 Y 5/4		SINGLE GR.	LOOSE	
80" – 101"	C3	MED-CRS SAND	10 YR 4/6		SINGLE GR.	LOOSE	

STANDING WATER 77" WEEPING WATER 73" ESTIMATED SEASONAL HIGH GW – 28" (ELEV. = 23.7)

STORMWATER DEEP OBSERVATION HOLE 3
GROUND ELEVATION – 25.1

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 21"	FILL	SANDY LOAM					
21" – 38"	Cd1	F. SANDY LOAM	2.5 Y 5/2	@26" –MANY, PROM., COARSE	MASSIVE	FRIABLE	
38" – 80"	C2	MED. SAND	2.5 Y 4/4		SINGLE GR.	LOOSE	

STANDING WATER 59" WEEPING WATER 56" ESTIMATED SEASONAL HIGH GW – 26" (ELEV. = 22.9)

STORMWATER DEEP OBSERVATION HOLE 4
GROUND ELEVATION – 25.7

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 5"	A	SANDY LOAM	10 YR 3/2		MASSIVE	FRIABLE	
5" – 10"	Bw	LOAMY SAND	10 YR 4/6		SINGLE GR.	FRIABLE	
10" – 26"	C1	MED. L. SAND	2.5 Y 4/4	@21" –MANY, PROM., COARSE	SINGLE GR.	SLIGHTLY HARD	WEAK CEMENTED
26" – 72"	C2	MED-CRS SAND	2.5 Y 4/4		SINGLE GR.	LOOSE	

STANDING WATER 62" WEEPING WATER 60" ESTIMATED SEASONAL HIGH GW – 21" (ELEV. 24.0)

STORMWATER DEEP OBSERVATION HOLE 5
GROUND ELEVATION – 24.5

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 20"	FILL	SANDY LOAM					
20" – 66"	C1	MED-CRS SAND	2.5 Y 4/4	@20" –MANY, PROM., COARSE	SINGLE GR.	SLIGHTLY HARD	WEAK CEMENTED

STANDING WATER 64" WEEPING WATER 60" ESTIMATED SEASONAL HIGH GW – 20" (ELEV. = 22.8)

STORMWATER DEEP OBSERVATION HOLE 6
GROUND ELEVATION – 24.0

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0" – 72"	C1	MED-CRS SAND	2.5 Y 4/4	@16" –MANY, PROM., COARSE	SINGLE GR.	LOOSE	A & B HORIZONS STRIPPED

STANDING WATER 60" WEEPING WATER 57" ESTIMATED SEASONAL HIGH GW – 16" (ELEV. = 22.7)

STORMWATER DEEP OBSERVATION HOLE 7
GROUND ELEVATION – 25.7

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE	OTHER
0 – 8"	A	SANDY LOAM	10 YR 3/2		MASSIVE	FRIABLE	
8" – 16"	Bw	SANDY LOAM	10 YR 4/6		MASSIVE	FRIABLE	
16" – 42"	Cd1	F. SANDY LOAM	2.5 Y 7/3	@37" –MANY, PROM., COARSE	MASSIVE	FRIABLE	
42" – 96"	C2	MED. SAND	2.5 Y 4/4		SINGLE GR.	LOOSE	

STANDING WATER 81" WEEPING WATER 78" ESTIMATED SEASONAL HIGH GW – 37" (ELEV. = 22.6)

TESTING PERFORMED BY: CAPUTO AND WICK LTD.
DATE OF STORMWATER SOIL TEST – AUGUST 7, 2015

LEGEND

–100–	EXISTING CONTOUR
–(100)–	PROPOSED CONTOUR
MA. STD.	MASSACHUSETTS STANDARD
INV.	INVERT OF PIPE
P. V. C.	POLYVINYL CHLORIDE PIPE
S. D. R.	STANDARD DIMENSION RATIO
R. C. P.	REINFORCED CONCRETE PIPE
H. D. P. E.	HIGH DENSITY POLYETHYLENE PIPE
R. D.	EXISTING ROOF DRAIN
CONC.	CONCRETE (BIT. OR P. C.)
BIT.	BITUMINOUS
P. C.	PORTLAND CEMENT
TYP.	TYPICAL
F.G. 100x00	FINISHED SPOT GRADE
100x00	EXISTING SPOT GRADE
T. C.	TOP OF CURB
B. C.	BOTTOM OF CURB
℄	PROPERTY LINE
-x-CLF-x-	CHAIN LINK FENCE
	DEEP OBSERVATION HOLE
	PERCOLATION TEST HOLE

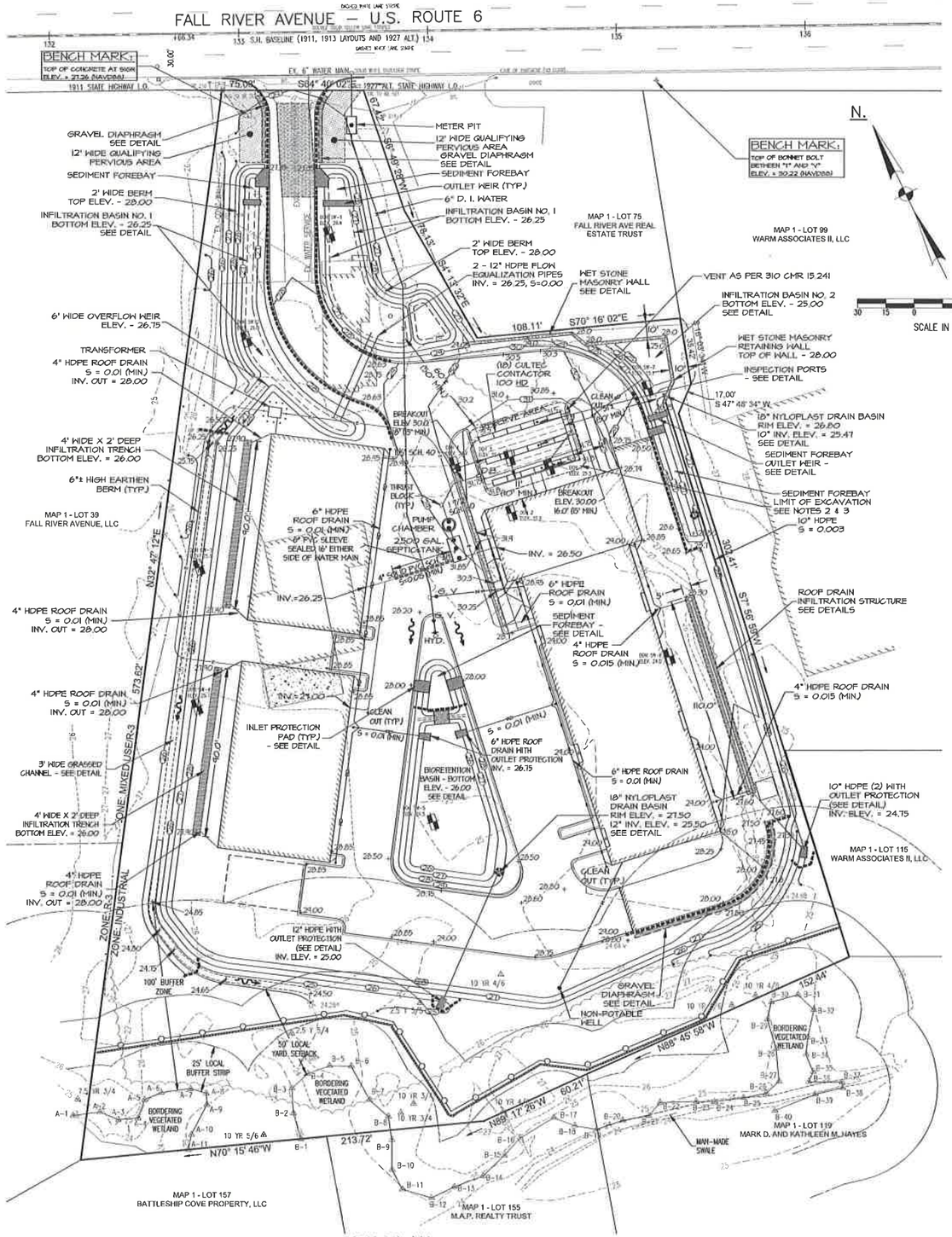
REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016
REV.: NOVEMBER 2, 2015

DRAINAGE AND GRADING PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1150 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel.: 401-434-8880
Fax: 401-434-1615
MAIL@CWLTD.NET
WWW.CWLTD.NET

DATE: OCTOBER, 2015

SHEET: 2 OF 5



LOCUS MAP
SCALE 1" = 500'

NOTES:
1. WORK SHALL CONFORM TO THE 310 CMR 15.00 STATE ENVIRONMENTAL CODE – TITLE 5 AND THE RULES AND REGULATIONS OF THE SEEKONK BOARD OF HEALTH.
2. STRIP ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, TREE ROOTS AND STUMPS AND ANY OTHER IMPERVIOUS OR SPECIFIED SOIL IN THE AREA OF THE SYSTEM AND 5 FEET HORIZONTALLY BEYOND THE EDGE OF THE SYSTEM STONE IN ALL DIRECTIONS, WHERE POSSIBLE. STRIP MATERIAL VERTICALLY 3" MINIMUM INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL. THE CONTRACTOR IS TO REMOVE ALL UNSUITABLE MATERIAL BELOW THE PROPOSED SOIL ABSORPTION SYSTEM PRIOR TO INSTALLATION. SEE DEEP OBSERVATION HOLES SOIL DATA FOR FURTHER INFORMATION. REPLACE WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF 310 CMR 15.255(3). ACTUAL FILL MATERIAL IS SUBJECT TO APPROVAL BY THE DESIGN ENGINEER AND/OR SEEKONK HEALTH AGENT. THE DESIGN ENGINEER AND/OR THE SEEKONK HEALTH AGENT MAY ALSO REQUIRE A SIEVE ANALYSIS OF THE FILL MATERIAL.
3. UNSUITABLE MATERIAL USED TO BACKFILL THE TEST HOLES SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF 310 CMR 15.255(3).
4. ALL PIPE TO BE 4" P. V. C. SCHEDULE 40 UNLESS OTHERWISE NOTED.
5. PLACE 6" MINIMUM COMPACTED CRUSHED STONE UNDER GREASE TRAP, SEPTIC TANKS, STORAGE TANK AND PUMP CHAMBER.
6. SOIL TESTING FOR THIS PROJECT WAS PERFORMED BY CAPUTO AND WICK LTD. AND WITNESSED BY THE SEEKONK BOARD OF HEALTH AGENT, BETH HALLAL. IF CONDITIONS ENCOUNTERED DURING CONSTRUCTION VARY SUBSTANTIALLY FROM THOSE SHOWN ON THIS PLAN, NOTIFY CAPUTO AND WICK, LTD. BEFORE PROCEEDING WITH CONSTRUCTION. IF IN DOUBT, ASK.
7. GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN.
8. INLET AND OUTLET TEES FOR SEPTIC TANK ARE TO BE LOCATED DIRECTLY BELOW ACCESS COVERS. TEES SHALL BE SCH. 40 PVC AND SHALL BE PROPERLY SUPPORTED BY A HANGER, STRAP OR OTHER DEVICE.
9. SEPTIC TANK AND PUMP CHAMBER SHALL BE DESIGNED FOR HS-20-44 LOADING.
10. THE PUMP CHAMBER SHALL BE MAINTAINED IN ACCORDANCE WITH 310 CMR 15.351 (3).
11. IT IS RECOMMENDED THAT THE SEPTIC TANK BE INSPECTED THICE A YEAR, AND BE CLEANED WHEN THE SOLIDS EQUAL ONE THIRD THE LIQUID DEPTH. EFFLUENT FILTER MUST BE CLEANED ANNUALLY, AT A MINIMUM.
12. BREAKOUT ELEVATION = 30.00. NO FINISHED GRADE BELOW 30.00 FOR 15 FEET (MINIMUM) FROM THE EDGE OF THE LEACHING AREA.
13. ALL EXISTING AND PROPOSED WATER WELLS FOUND WITHIN 200' OF PROPOSED SEWAGE DISPOSAL SYSTEM ARE SHOWN.
14. CONTRACTOR SHALL CONTACT "DIG-SAFE" PRIOR TO CONSTRUCTION. LOCATION OF UTILITIES ON THIS PLAN ARE FROM BEST AVAILABLE EXISTING INFORMATION, BUT ARE ONLY TO BE CONSIDERED APPROXIMATE.
15. MATERIAL AND EQUIPMENT FROM ALTERNATE MANUFACTURERS MAY BE USED, IF EQUAL. APPROVAL FOR ALTERNATE MATERIAL AND/OR EQUIPMENT REQUIRED FROM ENGINEER AND THE BOARD OF HEALTH PRIOR TO CONSTRUCTION. FULL SPECIFICATIONS FOR ALTERNATE EQUIPMENT MUST BE PROVIDED BY THE CONTRACTOR.
16. THE DESIGNER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY FOR MONITORING, INSPECTING OR SUPERVISING THE ACTUAL CONSTRUCTION WORK. AFTER EXCAVATING AND PRIOR TO INSTALLING ANY IMPORTED MATERIAL, CONTACT THE BOARD OF HEALTH AGENT FOR A BOTTOM OF EXCAVATION INSPECTION. AFTER SYSTEM COMPONENTS ARE IN PLACE AND PRIOR TO BACKFILLING, CONTACT THE DESIGNER TO VERIFY THE LOCATION AND ELEVATION OF SYSTEM COMPONENTS AND PREPARE A RECORD DRAWING AS REQUIRED BY THE BOARD OF HEALTH.
17. THE DESIGNER EXPRESSLY DISCLAIMS ANY RESPONSIBILITY FOR THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO CONSTRUCT THE SYSTEM IN ACCORDANCE WITH 310 CMR 15.00 AND LOCAL BOARD OF HEALTH REGULATIONS AND THE RESPONSIBILITY OF THE OWNER FOR PROPERLY MAINTAINING THE SYSTEM IN ACCORDANCE WITH 310 CMR 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS.
18. REFER TO 310 CMR 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS FOR ADDITIONAL INFORMATION CONCERNING THE CONSTRUCTION AND OPERATION OF THE SYSTEM. THE INSTALLER AND OWNER SHOULD REVIEW AND APPLY 310 CMR 15.00 AND THE LOCAL BOARD OF HEALTH REGULATIONS SYSTEM TO BE CONSTRUCTED BY A INSTALLER LICENSED BY THE SEEKONK BOARD OF HEALTH.
19. FILL MEETING THE REQUIREMENTS OF 310 CMR 15.255(3) MUST BE PLACED ON SCARIFIED, RELATIVELY DRY NATURAL SOIL. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED AND ALL WORK SHALL BE PERFORMED UNDER DRY CONDITIONS PER 310 CMR 15.255(6).
20. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER FOR TESTING OF PUMPS. PUMPS AND FLOATS ARE TO BE TESTED TO ENSURE THAT THE PUMPS OPERATE AT THE PROPER ELEVATIONS.
21. INSTALL MAGNETIC TAPE OVER ALL PIPE AND SYSTEM COMPONENTS.
22. THE PROPOSED WELL IS SOLELY FOR PROCESS WATER AND IS NOT FOR POTABLE WATER. WASTE PROCESS WATER WILL BE RECYCLED AND THE EXCESS BE DISPOSED OF IN A HOLDING TANK. FINAL DISPOSAL WILL BE AT AN OFF SITE LEGAL DISPOSAL FACILITY.

DEEP OBSERVATION HOLE 1
ORIGINAL ELEVATION – 25.32

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE
0 – 10"	Ap	SANDY LOAM	10 YR 2/1		MASSIVE	FRIABLE
10" – 24"	Bw	SANDY LOAM	2.5 Y 5/4	@21" –MANY, PROM., COARSE	MASSIVE	WEAK FRIABLE
24" – 39"	C1	COARSE SAND	10 YR 4/4		SINGLE GR.	LOOSE
39" – 110"	C2	MED. SAND	2.5 Y 5/3		SINGLE GR.	LOOSE

STANDING WATER 48" WEEPING WATER 41" ESTIMATED SEASONAL HIGH GW – 21" (ELEV. 23.57)
PERC. @ 24" + 18" = <2 MPI REMOVE TO 3" INTO C1 HORIZON

DEEP OBSERVATION HOLE 2
ORIGINAL ELEVATION – 25.18

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE
0 – 10"	Ap	SANDY LOAM	10 YR 2/1		MASSIVE	FRIABLE
10" – 22"	Bw	LOAMY SAND	2.5 Y 5/4	@16" –MANY, PROM., COARSE	MASSIVE	WEAK FRIABLE
22" – 50"	C1	COARSE SAND	10 YR 4/4		SINGLE GR.	LOOSE
50" – 104"	C2	MED. SAND	2.5 Y 5/3		SINGLE GR.	LOOSE

STANDING WATER 51" WEEPING WATER 47" ESTIMATED SEASONAL HIGH GW – 16" (ELEV. 23.85)
REMOVE TO 3" INTO C1 HORIZON

DEEP OBSERVATION HOLE 3
ORIGINAL ELEVATION – 25.04

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE
0 – 10"	Ap	SANDY LOAM	10 YR 2/1		MASSIVE	FRIABLE
10" – 24"	Bw	SANDY LOAM	2.5 Y 5/4	@16" –MANY, PROM., COARSE	MASSIVE	FIRM
24" – 29"	C1	COARSE SAND	10 YR 4/4		SINGLE GR.	LOOSE
29" – 104"	C2	MED. SAND	2.5 Y 5/3		SINGLE GR.	LOOSE

STANDING WATER 44" WEEPING WATER 39" ESTIMATED SEASONAL HIGH GW – 16" (ELEV. 23.71)
PERC. @ 24" + 18" = <2 MPI REMOVE TO 3" INTO C1 HORIZON

DEEP OBSERVATION HOLE 4
ORIGINAL ELEVATION – 24.72

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	STRUCTURE	CONSISTENCE
0 – 12"	Ap	SANDY LOAM	10 YR 2/1		MASSIVE	FRIABLE
12" – 36"	Bw	FINE L. SAND	2.5 Y 6/3	@15" –MANY, PROM., COARSE	MASSIVE	FIRM
36" – 45"	C1	COARSE SAND	10 YR 4/4		SINGLE GR.	LOOSE
45" – 100"	C2	MED. SAND	2.5 Y 5/3		SINGLE GR.	LOOSE

STANDING WATER 48" WEEPING WATER 40" ESTIMATED SEASONAL HIGH GW – 15" (ELEV. 23.47)
REMOVE TO 3" INTO C1 HORIZON

WITNESS: BETH HALLAL, SEEKONK BOARD OF HEALTH TESTING PERFORMED BY: CAPUTO AND WICK LTD.
DATE OF SOIL TEST – JULY 6, 2015

DESIGN DATA

- DAILY SEWAGE FLOW
  - OFFICE SPACE = 75 GALLONS PER 1,000 S.FF.
    - BUILDING NO. 1 – OFFICE SPACE 3,000 S.F.
    - BUILDING NO. 2 – OFFICE SPACE 1,600 S.F.
    - BUILDING NO. 3 – OFFICE SPACE 1,600 S.F.
  - TOTAL OFFICE SPACE FLOW = 6,200 S.F. X 75 GPD/1,000 S.F. = 465 GPD
  - WAREHOUSE/FACTORY, NO CAFETERIA
    - BUILDING NO. 1 – 5 WORKERS.
    - BUILDING NO. 2 – 4 WORKERS
    - BUILDING NO. 3 – 4 WORKERS
  - TOTAL WAREHOUSE FLOW = 13 WORKERS X 15 GPD/WORKER = 195 GPD
  - TOTAL DAILY FLOW 660 GALLONS PER DAY
- SEPTIC TANK REQUIREMENTS
  - VOLUME FIRST COMPARTMENT (OR TANK) = 2 x DAILY FLOW = 1,320 GAL.
  - VOLUME SECOND COMPARTMENT (OR TANK) = 1 x DAILY FLOW = 660 GAL.
  - TOTAL MINIMUM VOLUME = 1,980 GALLONS
  - USE TWO COMPARTMENT 2,500 GALLON TANK
- LEACHING AREA REQUIREMENTS
  - PERCOLATION RATE = <2 MINUTES PER INCH
  - DESIGN FOR 5 MINUTES PER INCH – SOIL TEXTURE CLASS 1
  - EFFLUENT LOADING RATE = 0.74 GAL. PER S.F.
  - USE CULTEC 100 HD CHAMBERS IN TRENCH CONFIGURATION
    - LEACHING AREA = 6.7 S. F. / L. F.
    - USE 9 TRENCHES 45.5 L. F.
    - TOTAL LEACHING AREA = 3 X 45.5 L. F. X 6.7 S. F./L. F. = 915 S. F.

TOTAL LEACHING CAPACITY = 915 S.F. X 0.74 GAL/SF = 667 GPD > 660 GPD

ELEVATION SCHEDULE

DESCRIPTION	ELEVATION
INVERT AT FOUNDATION	VARIES
INVERT IN – SEPTIC TANK	29.25
INVERT OUT – SEPTIC TANK	29.00
INVERT INLET PUMP CHAMBER	24.90
INVERT IN DIST. BOX	24.72
INVERT OUT DIST. BOX	24.55
BREAKOUT ELEVATION	30.00
INVERT INTO CHAMBERS	24.50
ELEV. TOP OF CHAMBERS	30.00
ELEV. BOTTOM OF CHAMBERS	24.00
EST. SEASONAL HIGH GW	23.85

LEGEND

-100-	EXISTING CONTOUR
-(100)-	PROPOSED CONTOUR
MA. STD.	MASSACHUSETTS STANDARD
INV.	INVERT OF PIPE
P. V. C.	POLYVINYL CHLORIDE PIPE
S. D. R.	STANDARD DIMENSION RATIO
R. C. P.	REINFORCED CONCRETE PIPE
H. D. P. E.	HIGH DENSITY POLYETHYLENE PIPE
R. D.	EXISTING ROOF DRAIN
CONC.	CONCRETE (BIT. OR P. C.)
BIT.	BITUMINOUS
P. C.	PORTLAND CEMENT
TYP.	TYPICAL
F.G. 100x00	FINISHED SPOT GRADE
100x00	EXISTING SPOT GRADE
T. C.	TOP OF CURB
B. C.	BOTTOM OF CURB
℄	PROPERTY LINE
-x-CLF-x-	CHAIN LINK FENCE
ST	SEPTIC TANK
DB	DISTRIBUTION BOX
	DEEP OBSERVATION HOLE
	PERCOLATION TEST HOLE

I CERTIFY THAT I HAVE CONTACTED THE SEEKONK WATER DISTRICT FOR THE LOCATION OF THE EXISTING WATER SERVICE CURB STOP FOR PLAT I, LOT 20 AND THAT IT IS SHOWN AS DEPICTED ON THE WATER DISTRICT INFORMATION. THE DIMENSION BETWEEN THE PROPOSED WATER SERVICE AND THE SEWAGE SYSTEM COMPONENTS COMPLIES WITH THE RULES AND REGULATIONS OF THE SEEKONK WATER DISTRICT.

PREPARED FOR:
PMI REALTY, LLC
1460 FALL RIVER AVE.
SEEKONK, MA 02771

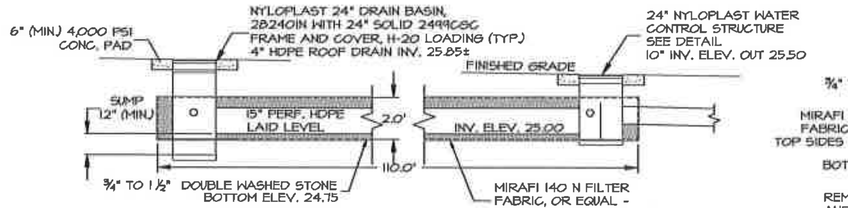
ALLAN L. SHAW CIVIL No. 35256 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016
REV.: NOVEMBER 2, 2015

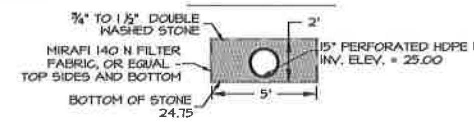
SEWAGE DISPOSAL SYSTEM PLAN
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering,
Environmental Services, Traffic Engineering
and Construction Engineering
1150 PAWTUCKET AVE
RUMFORD, R.I. 02916-1897
TEL: 401-434-0300
FAX: 401-434-1615
MAIL@CWLTD.NET
WWW.CWLTD.NET

DATE: OCTOBER, 2015
SHEET: 3 OF 5

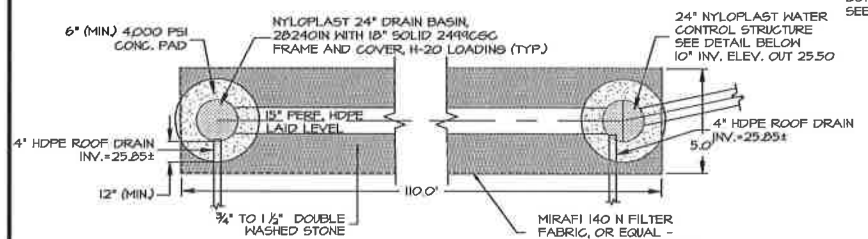


PROFILE



REMOVE ALL TOPSOIL, SUBSOIL, SANDY LOAM C HORIZONS AND UNSUITABLE MATERIAL BELOW AND WITHIN 5' OF THE SIDE OF STONE. AS REQUIRED, BACKFILL WITH CLEAN GRAVEL BORROW MEETING THE REQUIREMENT OF 310 CMR 15.255 (3).. SEE DRAINAGE WORK NOTE NO. 1 (THIS SHEET).

SECTION

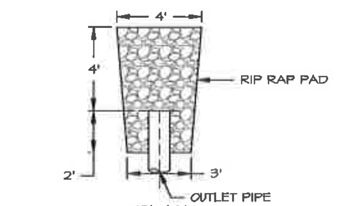


PLAN

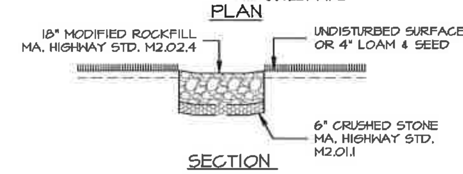
TO BE INSTALLED ON THE EASTERLY SIDE OF BUILDING NO. 1

DETAILS - ROOF DRAIN INFILTRATION STRUCTURE

SCALE 1" = 4'



PLAN

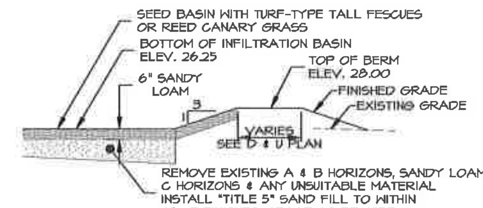


SECTION

TO BE INSTALLED AT THE ROOF DRAIN INLETS LOCATED AT NORTHEASTERLY AND NORTHWESTERLY CORNERS OF THE BIORETENTION BASIN, ALONG THE SOUTHERLY EDGE OF THE PROJECT AT THE END OF THE 12 " OVERLOW PIPE FROM THE BIORETENTION BASIN, AND THE END OF THE TWO 10" OVERFLOW PIPES FROM THE ROOF DRAIN INFILTRATION STRUCTURE AND INFILTRATION BASIN NO. 2.

DETAIL - PIPE END OUTLET PROTECTION

SCALE 1" = 4'

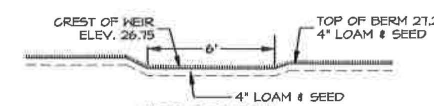


REMOVE EXISTING A & B HORIZONS, SANDY LOAM C HORIZONS & ANY UNSUITABLE MATERIAL INSTALL "TITLE 5" SAND FILL TO WITHIN 6" OF FINISHED GRADE AS REQUIRED

DETAIL FOR INFILTRATION BASINS NO. 1 & 2.

DETAIL - INFILTRATION BASIN SECTION

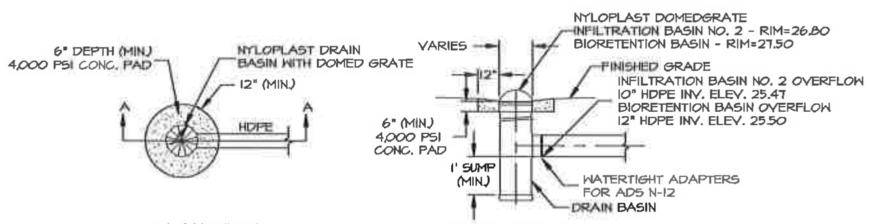
NOT TO SCALE



WEIR SECTION

DETAIL - INFILTRATION BASIN NO. 1 OUTLET WEIR

SCALE 1" = 4'



PLAN VIEW

SECTION A-A

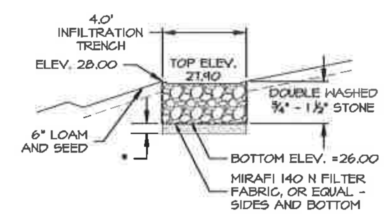
INFILTRATION BASIN NO. 2	DRAIN BASIN -	2824AG0IN
	DOMED GRATE -	2499OGD
BIORETENTION BASIN	DRAIN BASIN -	2818AG0IN
	DOMED GRATE -	1899OGD

COMPONENTS MANUFACTURERED BY:
NYLOPLAST - A DIVISION OF ADVANCED DRAINAGE SYSTEMS, INC.
180 RUMFORD AVENUE, MANSFIELD, MA 02048 - 781-223-1496

TO BE INSTALLED FOR OUTLETS OF INFILTRATION BASIN NO. 2 AND BIORETENTION BASIN

DETAILS - NYLOPLAST BASIN OVERFLOW STRUCTURES

NOT TO SCALE

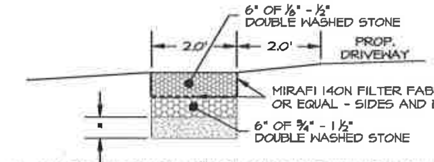


* - REMOVE ALL TOPSOIL, SUBSOIL, SANDY LOAM C HORIZON AND UNSUITABLE MATERIAL WITHIN LIMITS OF INFILTRATION TRENCH. REPLACE WITH "TITLE 5" FILL (310 CMR 15.255(3)) TO WITHIN 2' OF FINISHED GRADE AND 5 FEET ON ALL SIDES. SEE DRAINAGE WORK NOTE NO. 1 (THIS SHEET).

TO BE INSTALLED ON THE WESTERLY SIDE OF BUILDINGS NO. 2 & 3

DETAIL - INFILTRATION TRENCH

SCALE 1" = 4'

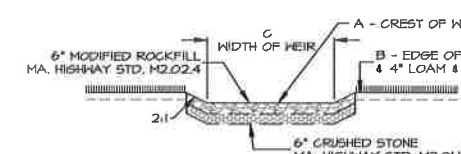


* - REMOVE ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL WITHIN LIMITS OF GRAVEL DIAPHRAGM. REPLACE WITH BANK RUN GRAVEL CONTAINING LITTLE TO NO FINES TO WITHIN 12" OF FINISHED GRADE.

SEE PLANS FOR LOCATIONS AND FINISHED GRADES

GRAVEL DIAPHRAGM DETAIL

NOT TO SCALE



WEIR SECTION

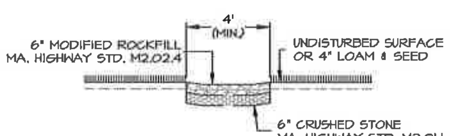
WEIR DIMENSIONS AND ELEVATIONS

	INFILTRATION BASIN NO. 1 (NW)	INFILTRATION BASIN NO. 1 (NE)	INFILTRATION BASIN NO. 2	BIORETENTION BASIN
A	26.75	26.75	26.75	27.00
B	27.25	27.25	27.25	27.50
C	3.0 FT.	3.0 FT.	2.5 FT.	6.0 FT.

TO BE CONSTRUCTED BETWEEN SEDIMENT FOREBAY AND INFILTRATION OR BIORETENTION BASIN

DETAIL - SEDIMENT FOREBAY OUTLET WEIR

SCALE 1" = 4'

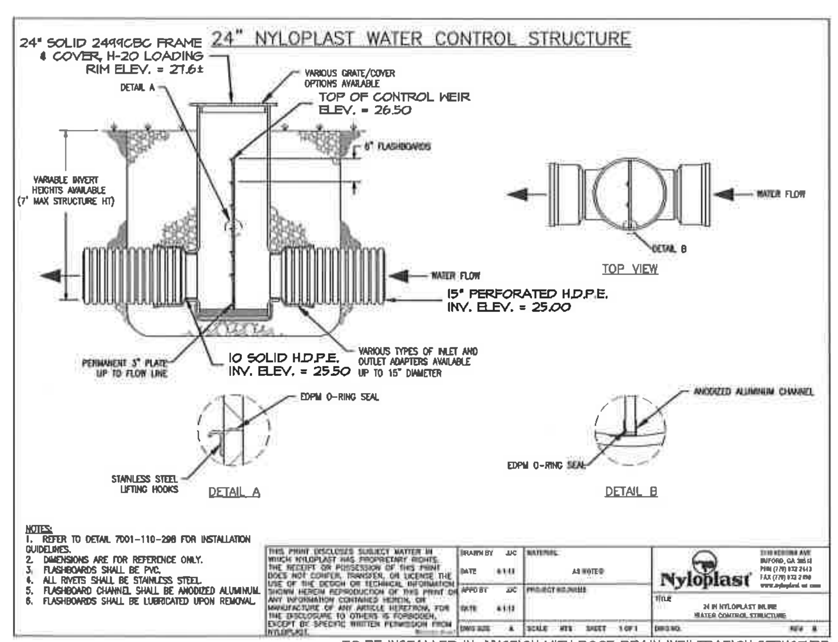


SECTION

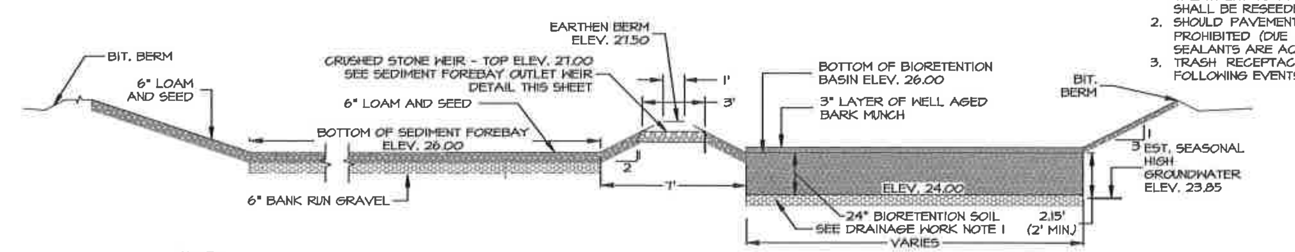
TO BE INSTALLED AT INLETS TO SEDIMENT FOREBAY

DETAIL - INLET PROTECTION PAD

SCALE 1" = 4'



TO BE INSTALLED IN JUNCTION WITH ROOF DRAIN INFILTRATION STRUCTURE



NOTE:
1. BIORETENTION FILTER FLOOR SHALL BE FINISHED WITH THREE INCHES OF MULCH AND BIORETENTION SOIL. MULCH WILL BE REPLACED AS NEEDED, OR EVERY TWO YEARS AS A MAXIMUM.
2. THE BIORETENTION SOIL SHALL BE AS SPECIFIED IN THE MASS. STORMWATER HANDBOOK.
3. REMOVE ALL TOPSOIL, SUBSOIL, SANDY LOAM C HORIZON AND UNSUITABLE MATERIAL WITHIN LIMITS OF BIORETENTION BASIN. REPLACE WITH "TITLE 5" FILL (310 CMR 15.255(3)) 6" OF FINISHED GRADE AND 5 FEET ON ALL SIDES. SEE DRAINAGE WORK NOTE NO. 1 (THIS SHEET).

BIORETENTION BASIN SECTION

SCALE 1"=4'

DRAINAGE WORK:

1. STRIP ALL TOPSOIL, SUBSOIL AND UNSUITABLE MATERIAL, INCLUDING SANDY LOAM OR FINER TEXTURED C HORIZONS, TREE ROOTS AND STUMPS AND ANY OTHER IMPERVIOUS OR SPECIFIED SOIL IN THE AREA OF THE DRAINAGE INFILTRATION BASINS, BIORETENTION BASIN, ROOF DRAINAGE INFILTRATION STRUCTURE AND INFILTRATION TRENCHES AND 5 FEET HORIZONTALLY BEYOND THEIR EDGES IN ALL DIRECTIONS. ALSO, STRIP MATERIAL VERTICALLY 3" MINIMUM INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL. REPLACE WITH GRANULAR FILL MEETING THE LATEST SPECIFICATIONS OF 310 CMR 15.255(3).
2. THE DRAINAGE SYSTEM SHALL BE INSTALLED BY STARTING AT THE DOWNGRADIENT END AND WORKING UPGRADIENT.
3. RIP-RAP SHALL BE INSTALLED AT PIPE INLETS AND OUTLETS IMMEDIATELY AFTER INSTALLING PIPE. STAKED STRAW BALES SHALL BE INSTALLED AT THE OUTFALL OF ALL BASINS AND SWALES AND SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY AREAS ARE STABILIZED.
4. RUNOFF SHALL NOT BE ALLOWED TO ENTER PIPES FROM UN-STABILIZED SURFACES.
5. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY PIPE INSTALLATION. ALL TRENCHES SHALL BE BACK FILLED AS SOON AS POSSIBLE. THE UPSTREAM ENDS OF PIPES SHALL BE CLOSED NIGHTLY WITH PLYWOOD CAPS.
6. IT IS IMPORTANT THAT BINDER COURSE BE INSTALLED IN ROADWAYS AS SOON AS FEASIBLE AS THESE AREAS WILL FUNCTION AS A CONDUIT FOR RUNOFF. FRAME & GRATE/COVER SETS MUST BE INSTALLED TO THE ELEVATION OF THE TOP OF THE BINDER COURSE. A SECOND ADJUSTMENT WILL BE NECESSARY PRIOR TO INSTALLING THE SURFACE COURSE.

DRAINAGE SYSTEM STORMWATER BEST MANAGEMENT PRACTICES

OPERATION & MAINTENANCE NOTES

1. THE SPECIFIED STORMWATER MANAGEMENT SYSTEMS RELY UPON PROPER MONITORING AND MAINTENANCE TO OPERATE AS DESIGNED AND INTENDED. A PROGRAM OF MONITORING AND MAINTENANCE MUST BE ON-GOING THROUGHOUT THE LIFE AND USE OF THE SITE AND IS THE OWNER'S RESPONSIBILITY. THE ACTIVITIES DESCRIBED BELOW ARE TO BE INITIATED AFTER COMPLETION OF THE PROJECT AND ARE NOT DIRECTLY RELATED TO CONSTRUCTION OF THE SITE, EXCEPT AS SPECIFICALLY NOTED.
2. UPON COMPLETION OF PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR WILL CONDUCT A FINAL INSPECTION OF ALL DRAINAGE SYSTEM COMPONENTS, CLEAN THE SYSTEM AND ALL ASSOCIATED STRUCTURES, REPAIR ANY VEGETATIVE SOIL EROSION AND SEDIMENT CONTROL MEASURES (SEEDING, PLANTINGS, ETC.) WHERE REQUIRED, AND REPAIR (OR REMOVE WHERE APPROPRIATE) TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES (COMPOST FILTER SOCK, STRAWBALES, CHECK DAMS, STONE BERMS ETC.). AFTER PERMANENT SOIL STABILIZATION HAS OCCURRED AND BEEN ACCEPTED BY THE OWNER, ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED.
3. AFTER SITE CONSTRUCTION WORK IS COMPLETE AND HAS BEEN ACCEPTED BY THE OWNER, MAINTENANCE OF THE DRAINAGE SYSTEM WILL BECOME THE RESPONSIBILITY OF THE OWNER. THE MONITORING AND MAINTENANCE OF ALL STORMWATER FACILITIES SHALL BE ADDRESSED AS FOLLOWS:

MONITORING:

THE DRAINAGE SYSTEMS ARE TO BE MONITORED BY THE OWNER, WHO SHALL DIRECT AN INDIVIDUAL TO ACT AS THE SYSTEM'S MANAGER. THIS INDIVIDUAL SHALL KEEP A LOG OF ALL INSPECTIONS, OBSERVATIONS, AND MAINTENANCE ACTIVITIES. THE LOG SHALL BE MADE AVAILABLE TO DEP AND/OR THE SEEKONK CONSERVATION COMMISSION WITHIN TEN (10) DAYS OF ANY WRITTEN REQUEST BY THE AGENCY.

THE OPERATION AND MAINTENANCE SCHEDULE SHALL CONSIST OF THE FOLLOWING:

1. THE DRIVEWAYS, WALKWAYS AND PARKING AREAS SHOULD BE SWEPT CLEAN ON A QUARTERLY BASIS TO REMOVE CONTAMINANTS AND SOIL FINES. THE METHOD OF SWEEPING SHALL BE BY EITHER HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. IT IS PARTICULARLY IMPORTANT TO SCHEDULE SPRING SWEEPING TO REMOVE RESIDUAL SAND RESULTING FROM WINTER SNOW AND ICE REMOVAL OPERATIONS.
2. INSPECT NYLOPLAST BASINS AT LEAST FOUR TIMES PER YEAR, AND REMOVE SEDIMENT, LEAVES, FLOATABLES, AND DEBRIS AS NECESSARY. BASIN SEDIMENT SHALL BE REMOVED WHEN THE DEPOSIT IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE SUMP TO THE INVERT OF THE LOWEST PIPE IN THE BASIN. IT IS IMPORTANT THAT THE SUMPS BE PROPERLY MAINTAINED TO PREVENT DISCHARGE OF FINES INTO THE STORMWATER SYSTEMS.
3. INSPECT INTERCONNECTION PIPING ON AN ANNUAL BASIS, AND REMOVE ALL FINES AND/OR OTHER CONTAMINANTS. A LATE SPRING OR EARLY SUMMER INSPECTION SCHEDULE IS CONSIDERED PREFERABLE.
4. ANY BROKEN OR DAMAGED PIPES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY, IN KIND.
5. ALL BROKEN, LEAKING, OR OTHERWISE DAMAGED STRUCTURES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY. DRAIN BASIN GRATES OR MANHOLE COVERS SHALL BE REPLACED WITH SIMILAR WEIGHT AND LOADING-CHARACTERISTIC REPLACEMENT PARTS. THE REPLACEMENT PARTS FOR ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.
6. THE INFILTRATION TRENCHES SHALL BE INSPECTED AT LEAST ONCE PER YEAR AND CLEANED IF NECESSARY. STONE CLOGGED WITH SEDIMENT SHALL BE REMOVED AND REPLACED WITH WASHED STONE OF SIMILAR SIZE.
7. THE INFILTRATION STRUCTURE SHALL BE INSPECTED AT LEAST ONCE PER YEAR AND CLEANED IF NECESSARY. ACCUMULATION OF SEDIMENT IN PIPES SHALL BE FLUSHED WITH A JETVAC, OR SIMILAR DEVICE.
8. INSPECT THE SEDIMENT FOREBAYS ON A QUARTERLY BASIS. REMOVE ANY SEDIMENT, LEAVES, AND DEBRIS AS NECESSARY.
9. INSPECT THE INFILTRATION BASINS AFTER EVERY MAJOR STORM DURING THE FIRST THREE MONTHS OF OPERATION AND TWICE PER YEAR THEREAFTER. A LATE SPRING OR EARLY SUMMER INSPECTION SCHEDULE IS CONSIDERED PREFERABLE. MOW THE SIDE SLOPES, RAKE BOTTOM BED, AND REMOVE TRASH AND DEBRIS TWICE A YEAR. EXAMINE OUTLET STRUCTURE FOR EVIDENCE OF CLOGGING OR OUTFLOW RELEASE VELOCITIES THAT ARE GREATER THAN DESIGN FLOW.
10. INSPECT THE BIORETENTION AREA TWICE A YEAR. A LATE SPRING OR EARLY SUMMER INSPECTION SCHEDULE IS CONSIDERED PREFERABLE. EXAMINE OUTLET STRUCTURE FOR EVIDENCE OF CLOGGING. MOW EMBANKMENT SIDE SLOPES TWICE A YEAR. REMOVE SEDIMENT EVERY FIVE YEARS, OR AS REQUIRED. REPLACE WOOD CHIPS WHEN THEY BECOME DETERIORATED OR EVERY THREE YEARS MINIMUM.
11. THE INFILTRATION BASINS AND BIORETENTION AREA SHALL BE INSPECTED AT LEAST TWICE PER YEAR. TILLING OF THE BASINS'S FLOOR SHOULD BE DONE WHEN AN OBVIOUS LOSS OF INFILTRATION OCCURS, AND PARTICULARLY IF STANDING WATER IS PRESENT FOR MORE THAN 48 HOURS AFTER A RAINFALL EVENT. AFTER REMOVAL OF ACCUMULATED SEDIMENT AND ANY MULCH BED, TILLING CAN BE ACCOMPLISHED WITH A ROTARY TILLER OR DISC HARROW, AND SAND CAN BE ADDED TO RESTORE INFILTRATION CAPACITY. FOR THE BIORETENTION BASIN, INSTALL NEW MULCH TO THE DISTURBED AREAS AS DEPICTED IN THE DETAILS. FOR THE INFILTRATION BASIN, RESEED WITH THE SEED MIXTURE SPECIFIED IN THE INFILTRATION BASIN DETAIL.
12. IF TILLING THE BOTTOM OF BIORETENTION BASIN FAILS TO IMPROVE INFILTRATION, REMOVE AT LEAST FOUR INCHES OF SOIL FROM BELOW THE MULCH BED AND REPLACE WITH BIORETENTION SOIL. MULCH THE DISTURBED AREAS AS DEPICTED IN THE DETAILS AND MAINTAIN UNTIL STABILIZED.
13. IF TILLING THE BOTTOM OF INFILTRATION BASINS FAILS TO IMPROVE INFILTRATION, REMOVE AT LEAST FOUR INCHES OF SOIL FROM THE BOTTOM OF THE BASIN AND REPLACE WITH LOAMY SAND TEXTURED SOIL. RESEED WITH THE SEED MIXTURE SPECIFIED IN THE INFILTRATION BASIN DETAIL.
14. INSPECT GRAVEL DIAPHRAGMS AT LEAST ONCE A YEAR. REMOVE ALL COARSE SEDIMENT AND DEBRIS. IF NECESSARY, REMOVE THE TOP 12" OF STONE, REPLACE THE FILTER FABRIC AND REPLACE REFILL WITH CLEAN, WASHED STONE.
15. IF UPON INSPECTION, EVIDENCE OF HYDROCARBONS (OIL AND GASOLINE) SHOULD BE OBSERVED, THEN STEPS SHALL BE INITIATED IMMEDIATELY TO REMOVE AND LAWFULLY DISPOSE OF THE MATERIAL. THE FULL EXTENT OF THE MATERIAL SHALL BE ASSESSED, AND THE MATERIAL SHALL BE REMOVED FROM ALL AFFECTED AREAS. AT NO TIME SHALL HYDROCARBON-BASED MATERIALS BE ALLOWED TO REMAIN IN ANY DRAINAGE STRUCTURE OR STORMWATER MANAGEMENT FEATURE. PAGE 5 OF 5 PROVIDES FURTHER INFORMATION REGARDING SPILL PREVENTION AND AN OVERVIEW OF RESPONSE AND REPORTING REQUIREMENTS IN THE EVENT THAT A SPILL SHOULD OCCUR.
16. DURING SNOW-REMOVAL OPERATIONS IN DRIVEWAYS AND PARKING AREAS, CARE SHALL BE TAKEN TO CLEAR THE DRAINAGE LEAK-OFFS AND TO ENSURE THAT THEY ARE NOT COVERED BY SNOW PILES. THE DESIGNATED SNOW DISPOSAL AREAS SHALL BE USED TO THE GREATEST PRACTICAL EXTENT.
17. THE TRASH DUMPSTER TO BE LOCATED ON SITE SHALL REMAIN FITTED WITH A PRECIPITATION-TIGHT COVER AND SHALL BE EMPTIED ROUTINELY, SUCH THAT OVERFLOW AND LEAKAGE ARE PROHIBITED.
18. ALL RAW AND FINISHED PRODUCTS, WASTE MATERIALS, AND CHEMICALS ASSOCIATED WITH MANUFACTURING OPERATIONS SHALL REMAIN STORED WITHIN THE BUILDINGS. ALL MANUFACTURING WASTES SHALL BE LAWFULLY DISPOSED OF. ANY INTRODUCTION OR DISCHARGE OF MANUFACTURING WASTES OR CHEMICALS INTO DRAINAGE SYSTEMS, STORMWATER FEATURES, OR ON ANY GROUND SURFACE IS STRICTLY PROHIBITED AND IS PUNISHABLE BY LAW.

GENERAL MAINTENANCE:

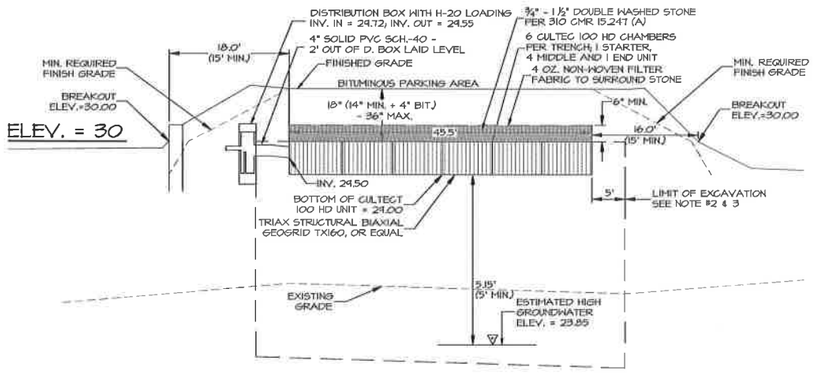
1. GRASSED SLOPES SHALL REMAIN WELL STABILIZED WITH CONTINUOUS GRASS COVER OR OTHER DESIGNATED SURFACE TREATMENT TO PREVENT EROSION AND CONSEQUENT SEDIMENT CONTRIBUTIONS TO DRAINAGE STRUCTURES. EXPOSED AREAS SHALL BE RESEEDED IMMEDIATELY TO STABILIZE EXPOSED SOILS.
2. SHOULD PAVEMENT SEAL COATING AND CRACK REPAIR BE REQUIRED, THE USE OF COAL-TAR BASED SEALANTS SHALL BE PROHIBITED (DUE TO HIGH CONTENT OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)). THE USE OF ASPHALT-BASED SEALANTS ARE ACCEPTABLE.
3. TRASH RECEPTACLES SHALL BE WELL SITED DISTANT FROM DRAIN INLETS AND SHALL BE EMPTIED REGULARLY AND FOLLOWING EVENTS.

REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016
REV.: NOVEMBER 2, 2015

DRAINAGE & BMP DETAILS
1727 FALL RIVER AVENUE
PLAT 1 - LOT 20
SEEKONK, MASSACHUSETTS

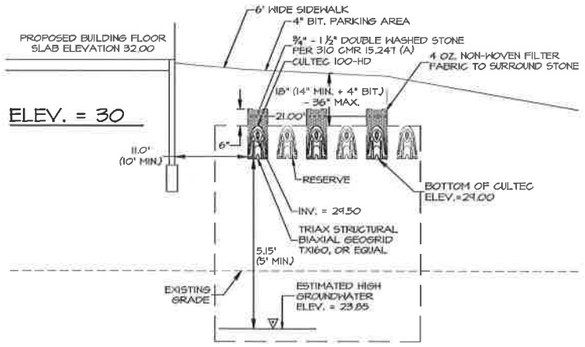
CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1150 PAWTUCKET AVE. RUMFORD, R.I. 02916-1897
MAIL@CWLTD.NET
WWW.CWLTD.NET

DATE: OCTOBER, 2015



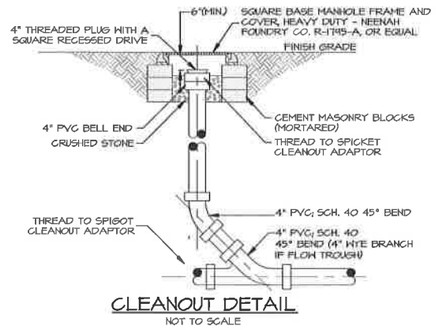
LEACHING CHAMBER PROFILE

SCALES {HORIZONTAL 1"=10' / VERTICAL 1"=2'



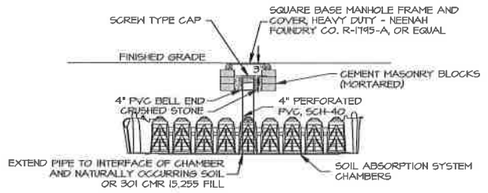
LEACHING CHAMBER SECTION

SCALES {HORIZONTAL 1"=10' / VERTICAL 1"=2'



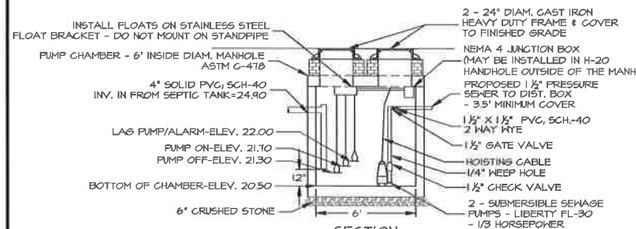
CLEANOUT DETAIL

NOT TO SCALE

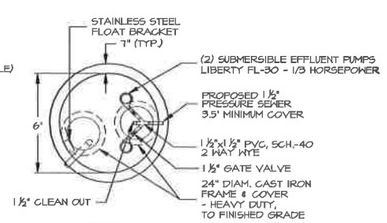


INSPECTION PORT DETAIL

NOT TO SCALE



SECTION

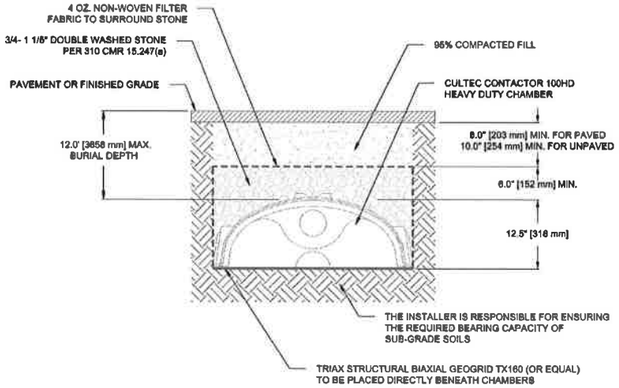


PLAN

NOTE:
FLOATS ARE TO BE SET TO SPECIFIED ELEVATIONS, PUMPS TO ALTERNATE.

PUMP CHAMBER DETAIL

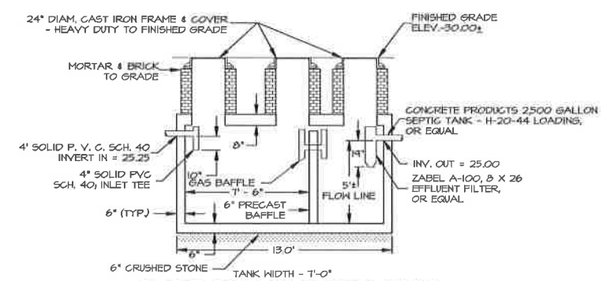
SCALE 1" = 4'



FOR SYSTEM SPECIFICATIONS SEE 310 CMR 15.249: DESIGN CRITERIA FOR SOIL ABSORPTION SYSTEMS

CONTACTOR 100HD HEAVY DUTY SEPTIC APPLICATION TRENCH TRAFFIC APPLICATION DETAIL

NOT TO SCALE



2,500 GALLON SEPTIC TANK

SCALE 1"=4'

PUMPING SYSTEM SPECIFICATIONS

PUMPS
- 2 - LIBERTY FL-30 HORSEPOWER - ⅓
  SOLIDS HANDLING CAPACITY - 3/4 INCH DISCHARGE - 1 ½" NPFT
  ELECTRICAL - 115 VOLTS* 10.3 AMPS SINGLE PHASE

CONTROL PANEL
- LIBERTY MODEL AE2IL=3 ENCLOSURE - NEMA 1
  ELECTRICAL - 120 VOLTS* 0-14.9 AMPS SINGLE PHASE
  HIGH LEVEL ALARM - VISUAL AND AUDIO

FLOATS
- COMPATIBLE WITH CONTROLS MERCURY FREE

PUMP CHAMBER
- 6' DIAM. MANHOLE - ASTM C-478

* ELECTRICAL - 230 VOLT SYSTEM MAY BE USED IF AVAILABLE

PUMPING NOTES

1. EQUIPMENT FROM OTHER MANUFACTURER'S MAY BE USED IF EQUAL. APPROVAL FOR ALTERNATE EQUIPMENT REQUIRED FROM ENGINEER PRIOR TO CONSTRUCTION. FULL SPECIFICATIONS FOR ALTERNATE EQUIPMENT MUST BE PROVIDED BY CONTRACTOR.
2. CONTROL PANEL AND ALARM TO BE MOUNTED INSIDE BUILDING IN A CONSPICUOUS LOCATION.
3. JUNCTION BOX IN PUMP CHAMBER OR IN SEPARATE HANDHOLE TO HAVE SHUT-OFF SWITCH.

BUOYANCY CALCULATIONS

ESTIMATED SEASONAL HIGH GROUNDWATER = ELEVATION 23.85

SEPTIC TANK
- USE CONCRETE PRODUCTS 2,500 GALLON TWO COMPARTMENT SEPTIC TANK
- BASE ELEVATION = 19.42
- VOLUME OF WATER DISPLACED = 13.0' X 7.0' X (23.85 - 19.42) = 403 C.F.
- WEIGHT OF WATER DISPLACED = 403 X 62.4 LBS./C.F. = 25,155 POUNDS
- WEIGHT OF TANK > WEIGHT OF WATER DISPLACED
- NO BUOYANCY COMPENSATION REQUIRED.

PUMP CHAMBER
- USE SCITUATE PRECAST 6' DIAM MANHOLE
- BASE ELEVATION = 19.83
- VOLUME OF WATER DISPLACED = $\pi \times 7.16^2 / 4 \times (23.85 - 19.83) = 162$ C.F.
- WEIGHT OF WATER DISPLACED = 162 X 62.4 LBS./C.F. = 10,119 POUNDS
- WEIGHT OF MANHOLE
  $([(\pi \times 7.16^2 / 4) - (\pi \times 6^2 / 4)] \times 61 + [(\pi \times 7.16^2 / 4) \times 0.67'] + [(\pi \times 7.16^2 / 4) \times 0.67']) \times 150$ LBS./C.F.
  = 18,928 LBS. > 10,119 LBS.
- NO BUOYANCY COMPENSATION REQUIRED

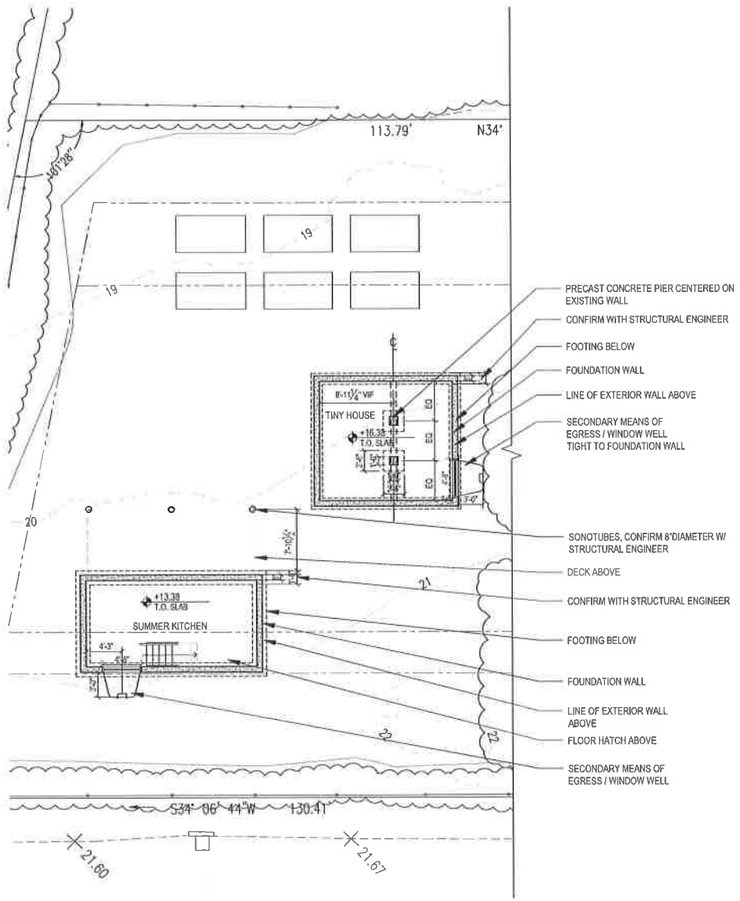
REV.: JANUARY 29, 2016
REV.: JANUARY 22, 2016
REV.: NOVEMBER 2, 2015

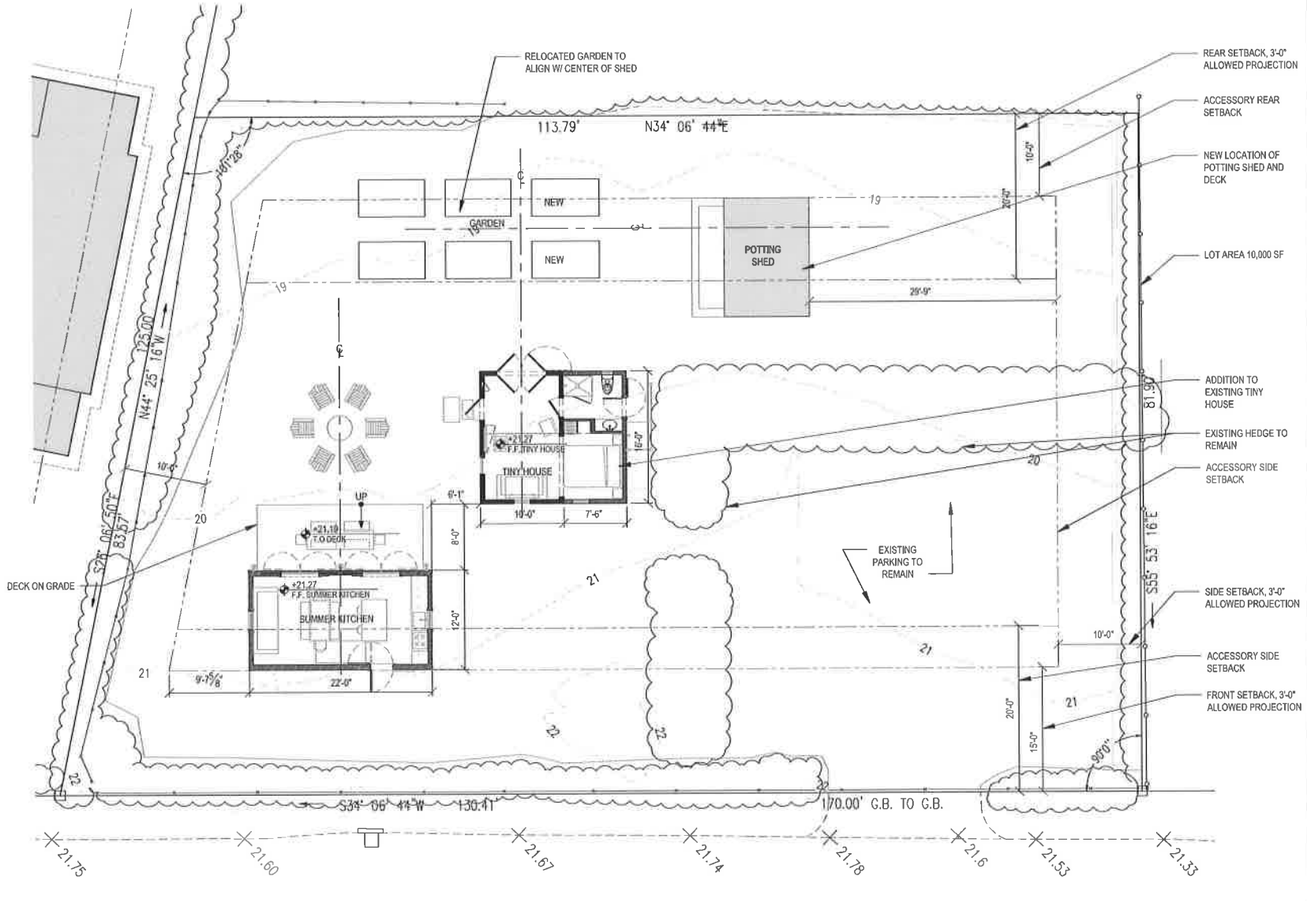
SEWAGE DISPOSAL SYSTEM DETAILS
1727 FALL RIVER AVENUE
PLAT 1 – LOT 20
SEEKONK, MASSACHUSETTS

CAPUTO AND WICK LTD.
Land Surveying, Civil Engineering, Environmental Services, Traffic Engineering and Construction Engineering
1150 PAWTUCKET AVE.
RUMFORD, R.I. 02916-1897
Tel: 401-434-8880
Fax: 401-434-1615
MAIL@CWLTD.NET
WWW.CWLTD.NET

DATE: OCTOBER, 2015

SHEET: 5 OF 5





COGGESHALL AVENUE

NOTES:

1) SEE GENERAL NOTES & PROJECT MANUAL

#	REVISION	DATE
1	ISSUED FOR EXCAVATION PERMIT	1.30.16

larsonandpaul | ARCHITECTS LLP

DOUGLAS LARSON, ARCHITECT

RODMAN PAUL, ARCHITECT

118 CHAMBERS ST

4TH FLOOR

NEW YORK, NY 10007

T 212-587-1900

F 212-587-3267

VAN BEUREN RESIDENCE

SITE PLAN - PROPOSED
231 COGGESHALL AV

JOB NUMBER:	00-00
SCALE:	AS NOTED
ISSUE DATE:	1.30.16
DRAWN BY:	VV
DRAWING #:	

STAMP:

SP:100.0

PAGE OF X

2 FOUNDATION PLAN
SCALE: 1/8"=1'-0"

1 SITE PLAN
SCALE: 1/8"=1'-0"

PRINTED ON: 1/30/2016 12:26 AM

Planning Board

100 PECK STREET
SEEKONK, MASSACHUSETTS 02771
1-508-336-2961

To: The Planning Board
From: John J. Aubin III, Town Planner
Date: February 9, 2016

APPROVAL NOT REQUIRED REVIEW (ANR)
Edward G. Turnbull Jr. – Plat 16, Lot 28 – 242 Lincoln Street

Existing Conditions:

The subject lot, AP 16, Lot 28, is comprised of 3.6 acres of land in an R-2 Zoning District having a minimum required 22,500 sf of area and 120' of frontage per lot in accordance with **Section 5** of the Seekonk Zoning By-Laws. The property is currently developed with a single family dwelling and two (2) sheds. Currently lot 28 has approximately 508 feet of contiguous frontage along Lincoln Street. Attached please find a copy of the Town's online GIS aerial of the subject lot and surrounding area.

Proposed Lot Amendments and plan references:

The submitted plan creates one new lot for development resulting in lot configurations as follows:

Lot 1: 120,091 square feet of land area and having 332 feet of contiguous frontage on Lincoln Street.

Lot 2: 33,167 square feet of land area and 175' of contiguous frontage on Lincoln Street.

Recommendation:

Staff recommends endorsement of the submitted APPROVAL NOT REQUIRED PLAN OF LAND prepared for Edward G. Turnbull Jr and Whitney Turnbull dated January 18, 2016 as it meets the exemption clause within the definition of a subdivision in the Rules and Regulations Governing the Subdivision of Land for changing the size of lots in such a manner so as to not leave any lot affected without the proper frontage.